



Machine Room Exercise Book

**For
BCA/BBA/B.Com/B.Sc.-BT/M.Sc.-BT**

**Hands on
Session on**

[MS Office 2010, C, C++, JAVA]



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Machine Exercise

on

MS Office 2010

(MS Word, MS Excel & MS PowerPoint)

taught in

BCA, BBA, B. Com



HANDS ON SESSION – 1

1. Type the following text in the normal view:-

Character is the sum total of a person's value, beliefs and personality. It is selected in our behaviour and in your actions. It needs to be preserved more than the richest jewel in the world.

To be winner takes character George Washington said, "I hope I shall always possess firmness and virtue enough to maintain what I consider the most valuable of all titles, the character of an honest man.

2. Save this file with any name in Desktop.
3. Rename this file with any other name.
4. Now close this file and open it again.
5. Bold, Italic & Underline follow on the first paragraph.
6. Cut the first paragraph and paste it below the second paragraph.
7. Apply center alignment to first paragraph and justify to last paragraph.
8. Increase line spacing to 1.5 to first paragraphs.
9. Include words only underline to all the text.
10. Change font style to italic, font color to Red and font size to 20.
11. Apply any text effect to first paragraph.
12. Now remove text effect.
13. Type $2\text{CO} + \text{O}_2 = 2\text{CO}_2$
14. Type $X^2 + Y^2 + 2XY = (X + Y)^2$
15. Give all caps effect to last paragraph.
16. Now save this file with your name and close the file only.
17. Open a new file and write "THE END" give it proper format according to your choice.
18. Now save the file and close MS Word.

EXTRA

Type
following

After clearing the written test, companies usually interview the candidates to gauge his/ her capabilities and personality. Basically there are two kinds of interview, the technical one, where stress is laid on checking your fundamentals in your core subjects and the HR one where your communication skills and personality is put to the test.



TOPIC: MS WORD
HANDS ON
SESSION – 2

1. Type the following text:-

You need to become a seeker of good. You need to focus on the positive in your life. Start looking for what is right in a passion or situation instead of looking for what is wrong. Because of our conditioning, most of us are so attuned to finding fault and looking for what is wrong what we often forget to see the positive picture.

3. Change the view of this page.
Outline view, print layout view, Reading layout view, Web layout view.
4. Type the following text.
- 1) Branch / Division
 - 2) Capital
 - Reserve & Surplus
 - 3) Current assets
 - Bank A/c
 - Cashing Rand
 - Deposit
 - 4) Current liabilities
 - Duties & taxes
 - Provision
 - Sun creditor
 - 5) Direct Expenses
 - 6) Loan
 - Bank DD A/c
 - Secured loan
 - Unsecured loan
 - 7) Misc. Expense.
 - 8) Suspense A/c
5. Check the Spellings error and correct it by using of auto correct.
6. Type this Text
- a. "The best way to predict the future is to create it"
7. Type "How are you." And check & correct grammatical mistake.
8. Find the synonyms and antonyms of the word "Goal" be using Thesaurus.
9. Write the footnotes "*" to say something about future.
10. Type MPS and insert a footnote as "An Institute devoted for educational development"



TOPIC: MS WORD
HANDS ON
SESSION – 3

1. Type the following text:-

“Indian culture” when these two words flash in my mind. A feeling of respect, regard of loan arises in my heart and I loan in the honour of my motherland “INDIA”. We neither must forget that our ancient culture is the very life and breadth of our country men. Bharat “India” has given us all, the gems of its great culture. But it is a matter of great distress that we all have forgotten the grandeur and glory of her heritage.

2. Change the margin of the text according to these directions as following:-

Left	=	1.25”	Top	=	1”
Right	=	1.25”	Bottom	=	1”

3. Change the page size to A4.
4. Change the orientation in to landscape or portrait.
5. Now show the print preview of text.
6. Change the background of page.
7. Apply different borders & Shadings to different Paragraphs.
8. Apply page border to your document.
9. Change the second paragraph in to upper case letter.
10. Change the first paragraph in to toggle case letter.
11. Change all the text in sentence case letter.
12. Press caps lock button on your keyboard and type BHOR YUVA SRIJAN SANSTHAN.
13. Now change this in to title case.
14. Drop the first letter of your first paragraph in margin and again as dropped in 2 lines.
15. Finally save and close this document.



Topic: MS Word Hands on Session – 4

1. Create a table as followings.

Mata Jhandewalan Education

Member's personal information	Professional details
-------------------------------	----------------------

Sr. No.	Name	Address	Phone	Designation	Dept	Salary
1	Ms. Pooja	Mumbai	9897012409	Manager	RD	25000
2	Mr. Deepak	Kolkata	9897646005	Sectary	Culture	27000
3	Ms. Ila	Noida	9897012410	GM	Educatio n	32000
4	Ms. Priti	Mathura	9897070503	Office In charge	Business	16000
5	Mr. Amit	Surir	9897012401	Chief Manager	WC	35000

2. Change the font colour Red, Font size 18, Bold, Italic and under line.
3. Insert a new row on the top of table with the heading "information about Employees".
4. Insert a column after salary and type Grade 'A','B' or 'C' in it.
5. Delete the last column of the table.
6. Delete the column with the heading "Dept".
7. Insert anew row at the end and type Total investment in first cell of this row.
8. Now calculate total salary given to employee using formula.
9. Insert a new column in between address & phone no. and merge it.
10. Now split this column into two rows and two columns.
11. Apply suitable table format to the table.
12. Now split this table from the fourth row.



13. Change the row height or row no.1 with the heading. "Information about all the yahoo members".



TOPIC: MS PowerPoint

- **Create a PowerPoint presentation on the topic “Hobbies” with at least 8 slides.**
- **Choose a slide layout, insert a picture, and apply a theme.**
- **Change the size and position of slide elements.**
- **Format pictures, shapes, and other slide content.**
- **Create speaker notes to use when you present.**
- **Share the presentation file for review.**
- **Print handouts and prepare to present.**

TOPIC: MS PowerPoint HANDS ON SESSION – 2

- **Apply transitions between slides**
Slide transitions are the effects that occur when you move from one slide to the next during an on-screen presentation. Here’s how to work with them.
- **Explore transition options**
Many transitions include additional options for how to play the effect; let’s take a look at them in this short video.
- **Set the transition speed**
Each transition comes with a default speed that you can adjust. Watch this video to find out more.
- **Prepare a basic handout**
Walk through the printing options for slides, handouts or notes so your printouts are the way you want them.
- **Edit headers and footers for handouts**
Learn how to add headers and footers to your presentation handouts in PowerPoint, and how to change their look or position on the page.
- **Print Notes Pages as handouts**
You can print your whole presentation as Notes Pages and give your audience the slides plus all the details in the notes.
- **Print handouts in Word**
Print notes from Word for richer formatting options. Edit content, apply styles, and then print your notes.



**TOPIC: MS
PowerPoint HANDS
ON SESSION – 3**

- Animate pictures, shapes, text, and other objects
You can animate anything in three steps. Select what you want to animate, select an animation, and tweak it with an effect option.
- Animate text
Good presenters are using less text to make their slides more visually appealing. But there's no reason why text can't be used effectively, especially with the help of animation.
- Animate pictures and shapes
The process of animating any object is the same: select what you want to animate, add an animation, then choose effect options. The same holds true for pictures and shapes.
- Animate charts and SmartArt
For charts, the trick is to find an animation that makes sense with your chart style. SmartArt animation works the same. You choose an animation that makes sense for how you want to bring in or emphasize the elements of the graphic.
- Create custom animations with motion paths
If you're the adventurous type, you can create some pretty amazing presentations with lots of motion path animations. It's not all that difficult once you get the hang of it.

**TOPIC: MS
PowerPoint HANDS
ON SESSION – 4**

- Create a flow chart
Create a flow chart in PowerPoint 2013 to illustrate sequential steps in a process, and choose from a variety of layouts and options. Watch this video to learn more.
- Draw and format flow chart shapes
Draw and format flow chart shapes, align them properly, and use the right shape for the right purpose in your flow chart. Watch this video to learn more.
- Align flow chart shapes and add connectors
We're ready to add connectors to the flow chart shapes we've laid out. The first step is to align the shapes so the connectors will be straight.
- Create an org chart
Add an org chart to your slide. Watch this video to get started.
- Build an org chart using the text pane
Add an org chart to your slide, and see how to use the text pane to do so.
- Build an org chart using SmartArt Tools
Add an org chart to your slide, and see how to use SmartArt Tools to do so.



TOPIC: MS EXCEL
HANDS ON
SESSION – 1

1. Create the following database:-
2. Change the format of top heading to italic, font size to 12; fill color to red and font color blue.
3. Italic the row 3; font size to 12 font color to grey.
4. Apply the format of row 3 on row 15.
5. Apply all borders and outside thick border to whole database.
6. Insert a new column b/w time and subject and type shift morning or afternoon. Insert a new row before row 4.
8. Now insert a new worksheet and rename this new worksheet as “duplicate”.
9. Copy your database on duplicate worksheet leaving 3 rows and 4 columns.
10. Delete row 3 and column F.

	A	B	C	D	E	F
1	Brij Sthali Academy	Brij Sthali Academy				
2		Half years Exam Shedule (Class XII)				
3		Sr. No.	Date	Day	Time	Subject
4		1	11/11/2008	Monday	2-5 PM	English-1
5		2	11/13/2008	Tuesday	9-11 AM	English-2
6		3	11/14/2008	Wednesday	2-5 PM	Physics-1
7		4	11/15/2008	Thursday	9-11 PM	physics-2
8		5	11/16/2008	Friday	10-12 PM	Math-1
9		6	11/17/2008	Saturday	9-10 AM	math-2
10		7	11/18/2008	Sunday	.	.
11		8	11/19/2008	Monday	9-11 PM	Chem-1
12		9	11/20/2008	Tuesday	2-5 PM	Chem-2
13		10	11/21/2008	Wednesday	2-5 PM	Hindi-1
14		11	11/22/2008	Thursday	2-5 PM	Hindi-2
15		12	11/23/2008	Friday	2-5 PM	Hindi-3



HANDS ON SESSION – 2

1. Create the Following database: -

	A	B	C	D
1	Pt. Deen Dayal Upadhyay Higher Secondary School			
2	Final Report Student Wise (Out of 500)			
3	Name	Half Yearly Total Marks	Annual Total Marks	Total
4	Ram	230	500	
5	Shyam	210	400	
6	Mahesh	220	300	
7	Dinesh	450	800	
8	Mukesh	600	200	

2. Calculate total marks in column D.
3. Name the range D4 to D8 as total and calculate the grand total of this total in F4 Hint: Use Function =Sum (Total)\
4. Click within the cell B5 and trace precedence.
5. Click inside cell B5 and trace dependence.
6. Now remove all arrows of formula auditing.
7. Click inside cell B4 and apply freeze pane.



TOPIC: MS EXCEL
HANDS ON
SESSION – 3

1. Create the following database: -
2. Sort the database in the ascending order of Marks.
3. Sort the database again in the descending order of Name.
4. Display the Subtotal of marks, subject wise.
5. Now remove the subtotal and create the following database.
6. Validate the column C that user can enter the age greater than 18 only.

	A	B	C	D	E
1	Ratan Lal Phool Katori Higher Secondary School				
2	Student performance (PCM Group) Dec.2002				
3	Name	Father's Name	Subject	Marks	Grade
4	Vishnu	Girraj Prasad	Physics	42	A
5	Vishnu	Girraj Prasad	Chemistry	33	B
6	Vishnu	Girraj Prasad	Math	44	A
7	Kumar	Babu Lal	Physics	43	A
8	Kumar	Babu Lal	Chemistry	42	A
9	Kumar	Babu Lal	Math	39	B
10	Pooja	R. K. Sharan	Physics	44	A
11	Pooja	R. K. Sharan	Chemistry	43	A
12	Pooja	R. K. Sharan	Math	42	A
13	Neha	Lakhan Singh	Physics	45	B
14	Neha	Lakhan Singh	Chemistry	54	B
15	Neha	Lakhan Singh	Math	34	A
16	Khushi	Pawan Sharma	Physics	28	B
17	Khushi	Pawan Sharma	Chemistry	65	B
18	Khushi	Pawan Sharma	Math	45	A

Hint: -

- Settings → **Allow:** Whole Number, **Data:** Greater than, **Minimum:** 18
- Input Message → **Title:** Wait, **Message:** Please enter the age greater than 18
- Error Alert → **Title:** Stop, **Message:** Age is not valid.



TOPIC: MS EXCEL
HANDS ON
SESSION – 4

1. Create the following database:
2. Using auto filter display all the records of Dabur Company.
3. Using auto filter display top 3 figures in Delhi Column.
4. Using auto filter display the sale less than 1000 in Delhi city.
5. Using Advanced filter Display the product and sale in Delhi and Mumbai only where the Company is MDH.

	A	B	C	D	E	F
1	Sales Analysis of products of different compnies in major cities.					
2	During time period of 1 April to 31st March					
3	Product	Company	Delhi	Mumbai	Chennai	Culcutta
4	Amul Tea	Amul	14500	25000	26001	4567
5	Amul Ice Cream	Amul	14230	4566	5896	879
6	Amul Chees	Amul	14785	25870	2698	876
7	Britaniya Good Day	Britaniya	3265	5987	5478	5567
8	Britaniya 50-50	Britaniya	993	230	258	34
9	Chat Masala	MDH	245	265	325	545
10	Kasuri Methi	MDH	753	951	258	679
11	Degi Mirch	MDH	365	852	745	98
12	Shahi Paneer Masala	MDH	654	532	580	234
13	Chana Masaa	MDH	953	981	900	434
14	Vatika Shampoo	Dabur	1235	2470	2654	566
15	Vatika Oil	Dabur	1002	2090	657	567
16	Chyavanprash	Dabur	870	853	876	3456
17	Amritprash	Dabur	135	234	778	76
18	Red Tooth Powder	Dabur	1752	1987	5464	876



TOPIC: MS EXCEL
HANDS ON
SESSION – 5

1. Create the following database: -

	A	B	C	D	E	F	G	H
1	Sales Analysis of products of different compnies in major cities.						Analysis	
2	During time period of 1 April to 31st March						Total of sale	
3	Product	Company	Delhi	Mumbai	Chennai	Culcutta	Rounded	
4	Amul Tea	Amul	14500	25000	26001	4567	Highest sale	
5	Amul Ice Cream	Amul	14230	4566	5896	879	Lowest sale	
6	Amul Chees	Amul	14785	25870	2698	876	Average of sale	
7	Britaniya Good Day	Britaniya	3265	5987	5478	5567	Date of Deposit	
8	Britaniya 50-50	Britaniya	993	230	258	34	Company wise total	
9	Chat Masala	MDH	245	265	325	545	Amul	
10	Kasuri Methi	MDH	753	951	258	679	Britaniya	
11	Degi Mirch	MDH	365	852	745	98	Dabur	
12	Shahi Paneer Masala	MDH	654	532	580	234	MDH	
13	Chana Masaa	MDH	953	981	900	434	No. of item Co. wise	
14	Vatika Shampoo	Dabur	1235	2470	2654	566	Amul	
15	Vatika Oil	Dabur	1002	2090	657	567	Britaniya	
16	Chyavanprash	Dabur	870	853	876	3456	Dabur	
17	Amritprash	Dabur	135	234	778	76	MDH	
18	Red Tooth Powder	Dabur	1752	1987	5464	876		

Analyze the data as following : -

- Calculate the total of sale in all 4 cities in cell H4.
 - Calculate square root the total and round of the square root up to 2 digits.
 - Calculate the average of sale in Delhi city.
 - Find the lowest and the highest sale in all 4 cities.
 - Display the current date and time.
2. Calculate the company wise total of sale.
3. Find the number of product of different companies.
4. Find the most repeated number of sale in all 4 cities.
5. Use all remaining functions on separate part of the sheet like.
- a. =Power(number, power)
 - b. =Mod(Number, divisor)
 - c. =Today () etc.



TOPIC: MS EXCEL
HANDS ON

1. Create the following database:-

	A	B	C	D	E	F
1	Batch Performance of Bath POA11					
2	Student ID	First Name	Last Name	Full Name	Total	Grade
3	BHO1	Aditya	Patodi		24	
4	BHO2	Prahlad	Manjrekar		35	
5	BHO3	Jhumman	Sharma		46	
6	BHO4	Ashee	Agrawal		56	
7	BHO5	Priya	Singh		34	
8	BHO6	Niketa	Narayan		23	
9	BHO7	Nandkishor	Kumar		36	
10	BHO8	Kittu	Asnani		38	
11	BHO9	Rohit	Mishra		45	
12	BHO10	Sonu	Agrawal		43	
13	BHO11	Nikhil	Gupta		47	
14	BHO12	Akhil	Pratap		67	
15	BHO13	Abhishek	Singhal		65	

2. Concatenate the first name and second name including Mr. in front of full name in cell D3.
3. Calculate the grade in column F according to Marks like

Marks	Grade
>40	A
<=40	B

4. Calculate the grade in column F according to Marks like.

Marks	Grade
>40	A
<=40 & >35	B
<=35	C

5. Use all remaining function on separate part of the sheet like.

- =proper(text)
- =upper(text)
- =lower(text) etc.

Find the length of text written in cell A1.



TOPIC: MS EXCEL
HANDS ON
SESSION – 7

Consider the data table as in previous exercise and perform following tasks...

- Create a chart
Create a chart (graph) that's recommended for your data, almost as fast as using the chart wizard that's no longer available.
- Create pie, bar, and line charts
In this video, see how to create pie, bar, and line charts, depending on what type of data you start with.
- Customize charts
After you create your chart, you can customize it to show additional chart elements, such as titles and data labels, or to make it look exactly the way you want.
- Create a combo chart
Change the chart type of one or more data series in your chart (graph) and add a secondary vertical (value) axis in the combo chart.
- Copy a chart
To copy a chart to another worksheet in the same or a different workbook, right-click the chart and click Copy.



Machine Exercise

on

C Programming

taught in

BCA-I & II Semester



MACHINE EXERCISE 1

1. Write a C program to input two numbers and print them on screen.
2. Write a C program to print your name on screen.
3. Write a C program to print name of your institution on screen.
4. Write a C program to print sum of two numbers.

EXTRA QUESTIONS

5. Write a C program to print product of two numbers.



MACHINE EXERCISE -2

1. Write a C program to print the product of three numbers.
2. Write a C program to calculate the simple interest.
3. Write a C program to calculate the average of three numbers.

EXTRA QUESTIONS

4. Write a C program to input the date, month and year from keyboard and print them on screen.
5. Write a C program to print the square of inputted number.



MACHINE EXERCISE 3

1. Write a C program to check whether a given number is odd or even.
2. Write a C program to check a given number is divisible by 5 or not.
3. Write a C program to give bonus to all those employees whose salary is less than 15000.

EXTRA QUESTIONS

4. Write a C program to provide bonus of 30% to those whose age is greater than 40, 20% for age greater than 30, 15% for other.
5. Write a C program to calculate Division of a student (First ≥ 60 , Second ≥ 45 , Third ≥ 33 otherwise Fail).



MACHINE EXERCISE 4

1. Write a C program to print odd & even numbers between 1 and 100.
2. Write a C program to print table of a given number from a given number up to 1 in reverse order.
3. Write a C program to print triangle

*
**

MACHINE EXERCISE 5

1. Write a C program to generate table of a given number.
2. Write a C program to calculate a^b without using pow().
3. Write a C program for sine series and cosine series.
4. Write a C program to print Factors of a number.
5. Write a C program to print GCD of a given number.

MACHINE EXERCISE 6

1. Write a C program to print triangle.
 - a. 1
 - b. 12
 - c. 123
 - d. 1234
 - e. 12345
2. Write a C program to print the sum of digits of a given number.
3. Write a C program to product of digits of a given number.'
4. Write a C program to print prime numbers between 1 and 100.



5. Write a C program to check whether a given number is Armstrong number or not (a Armstrong number is a number for which sum of cube of all digits is equal to that number e.g.
6. $153=1^3+5^3+3^3=1+125+27$).
7. Write a C program to print numbers between a given ranges?

MACHINE EXERCISE 7

1. Write a C program to create a structure of student & print it on screen.
2. Write a C program to enter faculty information along with their hire date being stored in an inner structure and store it on screen.
3. Write a C program to enter ten Students information into an array and print them.

MACHINE EXERCISE 8

1. Write a C program to show the use of union.
2. Write a C program to create enumeration for Direction (East, West, North and South) and use them to set the position of temples in India.
3. Write a C program to create enumeration for values True and False and use them.



MACHINE EXERCISE – 9

1. Write a C program to write a function to return sum of two numbers.
2. Write a C program to create a function to return square of a number.
3. Write a C program to create a function to calculate factorial of a number.
4. Write a C program to write a function to swap two numbers.
5. Write a C program to calculate nCr .

MACHINE EXERCISE – 10

1. Write a C program to input ten numbers in array and print them.
2. Write a C program to print sum of ten inputted numbers.
3. Write a C program to calculate average of ten numbers.
4. Write a C program to input values for a matrix and print the matrix on screen.
5. Write a C program to add two matrices.



MACHINE EXERCISE – 11

1. Write a C program to input a string from keyboard and print them on screen ten times.
2. Write a C program to input two strings and print them on screen ten times.
3. Write a C program to input two name, concatenate them and print on screen.
4. Write a C program to input a string and copy it in new String array.
5. Write a C program to input a string and find its length and print the string character-wise.



MACHINE EXERCISE 12

1. Write a C program to create a pointer to all basic data types and print their values through both variable and pointer.
2. Write a C program to create a number array to store numbers and print them using pointer.
3. Write a C program to create a number array to store numbers and print their sum and average using function.
4. Write a C program to perform operation on pointers.
5. Write a C program to show the use of reference variable.

MACHINE EXERCISE – 13

1. Write a C program to write to a file.
2. Write a C program to read from the file.

Extra questions

1. Write a program compare two number and print the largest one.
2. Write a C program to calculate the average of three numbers.
3. Write a C program to check whether a given number is odd or even.
4. Write a C program to print odd & even numbers between 1 and 100.
5. Write a C program to print table of a given number from a given number up to 1 in reverse order.



6. Write a C program to create a function to calculate factorial of a number.
7. Write a C program to create a function to swap two numbers with call by reference.
8. Write a C program to count the number of characters in a given string.
9. Write a C program to input an integer and print it's digits in reverse.
10. Write a C program to calculate the sum of digits of a given number.

Test your C skill

Write an algorithm, draw flowchart and develop a game KBC.



Machine Exercise

on

OOPs using C++

taught in

BCA-III Semester



MACHINE EXERCISE – 1

6. Write a C++ program to input two numbers and print them on screen.
7. Write a C++ program to print your name on screen.
8. Write a C++ program to print sum of two numbers.
9. Write a C++ program to calculate the simple interest.
10. Write a C++ program to calculate the average of three numbers.

MACHINE EXERCISE – 2

1. Write a C++ program to check whether a given number is odd or even.
2. Write a C++ program to check a given number is divisible by 5 or not.
3. Write a C++ program to print odd & even numbers between 1 and 100.
4. Write a C++ program to print table of a given number.

MACHINE EXERCISE – 3

6. Write a C++ program to input ten numbers in array and print the sum.
7. Write a C++ program to search an element from array with Linear Search.
8. Write a C++ program to search maximum element of array.
9. Write a C++ program to input values for a matrix and print the matrix on screen.
10. Write a C++ program to add two matrices.



MACHINE EXERCISE – 4

6. Write a C++ program to input a string from keyboard and print them on screen ten times.
7. Write a C++ program to input two name, concatenate them and print on screen (Use : strcat()).
8. Write a C++ program to input a string and copy it in new String array(Use : strcpy()).
9. Write a C++ program to input a string and find its length and print the string character-wise(Use: strlen()).

MACHINE EXERCISE – 5

1. Write a C++ program to input two name, concatenate them and print on screen without using predefined function.
2. Write a C++ program to input a string and copy it in new String array without using predefined function.
3. Write a C++ program to input a string and find its length and print the string character-wise without using predefined function.



MACHINE EXERCISE 6

6. Write a C++ program to create a pointer to all basic data types and print their values through both variable and pointer.
7. Write a C++ program to create a number array to store numbers and print them using pointer.
8. Write a C++ program to create a number array to store numbers and print their sum and average using function.
9. Write a C++ program to perform operation on pointers.
10. Write a C++ program to show the use of reference variable.

MACHINE EXERCISE – 7

6. Write a C++ program to write a function to return sum of two numbers.
7. Write a C++ program to create a function to return square of a number.
8. Write a C++ program to create a function to calculate factorial of a number.
9. Write a C++ program to write a function to swap two numbers.

MACHINE EXERCISE – 8

1. Write a C++ program to create a inline function to square a number.
2. Write a C++ program to create a function to swap two numbers with call by reference.
3. Write a C++ program to create function to pass pointer of two numbers and swap them.
4. Write a C++ program to create a function to calculate simple interest.



MACHINE EXERCISE 9

4. Write a C++ program to create a structure of student & print it on screen.
5. Write a C++ program to enter faculty information along with their hire date being stored in a inner structure and store it on screen.
6. Write a C++ program to enter ten Students information into an array and print them.

MACHINE EXERCISE 10

4. Write a C++ program to show the use of union.
5. Write a C++ program to create enumeration for Direction (East, West, North and South) and use them to set the position of temples in India.
6. Write a C++ program to create enumeration for values True and False and use them.

MACHINE EXERCISE 11

1. Write a C++ program to use dynamic memory allocation for a character array.
2. Write a C++ program to create a number array to store number on user demand and print them using Dynamic Memory Allocation.
3. Write a C++ program to create a number array to store numbers on demand and print their sum using Dynamic Memory Allocation.



MACHINE EXERCISE 12

1. Write a C++ program to create register variable and use them to enter matrix and print it on screen.
2. Write a C++ program to create static variable and print its value after changing it.
3. Write a C++ program to show the use of global variables.
4. Write a C++ program to access the global variables within inner blocks using Scope Resolution Operator.
5. Write a C++ program to keep track of how many times a function is called.

MACHINE EXERCISE 13

1. Write a C++ program to create class of complex numbers and two functions to input number and to print the complex number.
2. Write a C++ program to create a class for Coordinate value and two functions to enter and print them.
3. Write a C++ program to create a class Triangle with one member function to calculate the area of Triangle.
4. Write a C++ program to create a class Rectangle with function to calculate area.
5. Write a C++ program to create a class Student with student information and appropriate function within the class to enter and access the data.



MACHINE EXERCISE 14

1. Write a C++ program to add constructor to Complex class.
2. Write a C++ program to add constructor to Coordinate class and print a message in constructor.

MACHINE EXERCISE 15

1. Write a C++ program to add default constructor, copy constructor and destructor to Complex class.
2. Write a C++ program to create a class Circle which contains radius of circle, default constructor, area () function for calculating area and destructor to de- initialize the value of radius.
3. Write a C++ program to create a class Number which contains an integer number and functions to calculate square, factorial and cube of the number along with constructor and destructor.

MACHINE EXERCISE 16

1. Write a C++ program to create a friend function to calculate area of both circle and rectangle.
2. Write a C++ program to create class complex friend to class Coordinate and use this friendship.
3. Write a C++ program to create class Circle friend to class Rectangle and calculate the area of circle in Rectangle Class.
4. Write a C++ program to create a class Width and another class Height and a friend function to both which calculates the volume of Cylinder.
5. Write a C++ program to calculate area of circle, Triangle and rectangle in one function.



MACHINE EXERCISE 17

1. Write a C++ program to overload function Area () to calculate area of Circle, rectangle and triangle.
2. Write a C++ program to overload + operator to add two Complex Number.

MACHINE EXERCISE 18

1. Write a C++ program to create a class Circle and inherit it in class Cylinder.
2. Write a C++ program to add a function Area () to Circle and Cylinder to calculate area of circle and cylinder.
3. Write a C++ program to create a class A with three member one public, one is protected and other is private. Create another class B and inherit class A within it and show the different visibility criteria.

MACHINE EXERCISE 19

1. write a C++ program to show how virtual class is used to remove multiple class inheritance in diamond class hierarchy.
2. Write a C++ program to show overriding of function display () in two class A and B.
3. Write a C++ program to use virtual function in classes A and B to remove overriding.
4. Write a C++ program to create a class C derived from class B which in turn derived from A. All if these classes include same data member "i" and member function show ()



MACHINE EXERCISE 20

1. Write a C++ program to create a class Shape which is abstract class.
2. Write a C++ program to derive the Shape class into class Circle.
3. Write a C++ program to create a base class A and derived class B.
Assign the object of B to A and see what happened to object of A.
4. Write a C++ program to define base class shape and two derived class Rectangle and Circle and call the same function of class Circle and Rectangle through base class pointer on user demand (without virtual function)
5. Write a C++ program to with the use of virtual function rewrite the above program.

MACHINE EXERCISE 21

3. Write a C++ program to write to a file.
4. Write a C++ program to read from the file.
5. Write a C++ program to read and write strings from file.
6. Write a C++ program to read and write objects from file.
7. Write a C++ program to create a class person containing basic data of a person and member functions to enter data from user, display it, save it into file and read it from file.
8. Write a C++ program to catch a simple exception of Division by zero.



Machine Exercise

on

JAVA

Programming

taught in

BCA-V Semester



DEMO 1

INTRODUCTION TO JAVA

Q1. Write a program which takes two number and interchange variable's value.

- Without using third variable
- With using third variable

Q2. Write a program for simple interest.

Q3. Write a program for addition, subtraction, multiplication, division.

Q4. Write a program for:-

- Area of circle
- Circumference of circle

Q5. Write a program which calculates area of rectangle.



DEMO 2

PROGRAMMING CONSTRUCTS

Q1. Write a program which display name of month as per variable's values
Example: 1 for January, 2 for February etc...

Q2. Write a program which takes character and find out this character is vowel or not

Q3. Write a program which takes salary and calculate tax as per following condition

- a) Salary >20000 tax is 20 % of the salary
- b) Salary >10000 and salary <20000 tax is 10 % of the salary
- c) Salary <10000 say no tax.

Q4. Write a program which takes three integer variable and find out the largest value.

Q5. Write a program which takes number and find out its table.

Q6. Write a program which display

```
*  
*   *  
*   *   *  
*   *   *   *
```

Q7. Write a program which display

```
1  
1      2  
1    2  3  
1    2  3  4
```

Q8. Write a program which display all even numbers from 20 to 40.

Q9. Write a program which display sums of all add number from 100 to 120.

Q10. Write a program which displays factorial of given number.

Q11. Display fabonic series up to 8 times.



DEMO 3

CLASSES

- Q1. Write program which takes dd, mm, yy three integer variable by parameter and display it.
- Q2. Write a program which accept two integer parameter and display it addition and division.
- Q3. Write a program which takes name and age , and make two object and pass one object value to another object.
- Q4. Describe private and public access specifies.



DEMO 4 CONSTRUCTOR

- Q1. Write a program for factorial
- Q2. Write a program for fabonic series
- Q3. Write a program which describe default and parameterized constructor.
- Q4. Write a program which have constructor loading concept for addition, subtraction of two variable's value.
- Q5. Write a program which have two method of same name but parameter must be different for area of rectangle and area of circle.



DEMO 5 ARRAY AND STRING

Q1. Write a program which takes ten integer values and find out

- a) sum of all value
- b) sum of odd values
- c) Display all values which is less than 100.
- d) Search given element
- e) Display all even number

Q2. Display sum of two matrixes.

Q3. Write a program which takes on string as “this is India and we are Indian” and display

- a) length of string
- b) index of ‘d’
- c) replace ‘a’ with ‘z’
- d) Convert string in to upper case
- e) Concatenate “computer” at last of the string

Q5. Write a program which describe casting and converting concept
Use program from addition.



DEMO 6

INHERITANCE

- Q1. Make a class father as a super class. and one subclass called child , father class have two method ' void show() ' and void display() , a child class have 'void hello()' method . call all these method by sub class method.
- Q2. Suppose there is father as a super class and one subclass called child , father class have one method ' void show()' and subclass also have method 'void show()' . Write a program to call super class function.
- Q3. Write a program which describe final modifier affect on variable, method and class



DEMO 7 EXCEPTION

Q1. Write a program to generate exception:-

- a) Array Index Out of Bound
- b) Division by zero

Q2. Write a program to describe the usage of try and finally clause.

Q4. Create a user define exception, which is to be generate whenever the user inputs the string "hello".



DEMO 8 PACKAGE

- Q1. Create a program to act as a calculator , make one package called 'calcu' and store all four class like add, sub, mult, div. and import in another simple program.
- Q2. Create a package called 'home pack. Create two classes called expenditure and income. the expenditure class has variable to store value of food , clothing, education expenses. the income class has variable to store value of salary , allowance, and rent. Create a class budget, which uses the classes of this package to calculate the saving of the family.



DEMO 9

STREAM AND FILES

- Q1. Write a program to delete only those files whose extension is 'html' in c:\jdk1.2\bin directory.
- Q2. Write a java program to accept a list of file as parameter. Check if they exist and are ordinary file. Display the name of file and its size. Maintain error message.
- Q3. Write a java program to accept ten characters into array. If they accept character is in lower case, the they should be converted to uppercase and vice versa.



DEMO 10

I/O STREAM

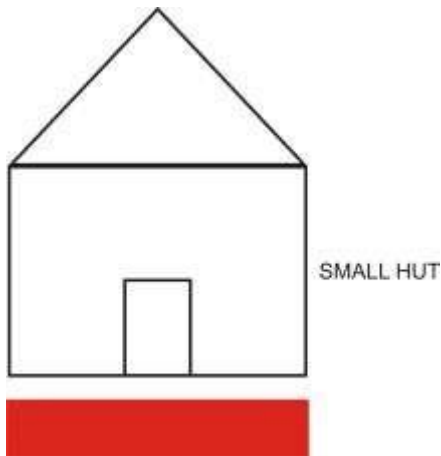
- Q1. Write a program to accept name and age from the user and store it into hard disk file and display its file content from beginning.
- Q2. Write a program which read file name from the user and display its contents on the screen.
- Q3. write a program which read file name from the user and store its contents on the other file 'work2005'.



DEMO 11 APPLET

Q1. Create an applet that accept a date and display that along with the message “the date is “ . The applet should have Helvetica font the string should be displayed in orange colour and should have a size 30.

Q2. DRAW this small hut on applet.



Q3. Create a applet that display your name in applet .your name must be receive from html file with param tag.



DEMO12 EVENTS

- Q1. Write a program that display mouse co-ordinate where ever mouse is pressed.
- Q2. Make one text field and ok button on applet. Enter your name in text field and when we click on OK button, text field entry will display on applet in red colour and size 20.
- Q3. Take one text field and two button 'start' and 'stop', when we click on 'start' button counting from 1 to 10 start in text field and when we click on 'stop' button counting will stop.



DEMO13 CONTROLS AND LAYOUT

Q1. Make student registration form which is look like this:-

The screenshot shows a Java Applet window titled "Applet". Inside, the form is titled "Student Registration Form" and has a green dotted background. It contains the following elements:

- NAME:- [Text Field]
- AGE:- [Text Field]
- Gender selection: ☐ MALE, ☐ FEMALE
- Location selection: ☐ AGRA, ☐ MATHURA, ☐ DELHI
- Buttons: SUBMIT, CLEAR
- Language list (in a separate box): C++, MS-OFFICE, HTML, JAVA, VB, ORACLE

Q2. Write a program which accept name in text field and if we click on 'add' button text field entry goes to choice. Figure is given below.

The screenshot shows an "APPLET VIEWER" window. It contains a text field with the label "ENTER NAME" and an "ADD" button. Below the text field, a list box displays the names entered: RAM, MOHAN, SITA, and GAGAN.



DEMO 14

FRAME AND MENU

- Q1. Create one applet which has button 'call Frame'. When we click on this button frame call, frame must have menus (File, Edit, and Windows).
- Q2. When we click on save menu item in file menu this will call SAVE dialog box and
When we click on save menu item in file menu this will call OPEN dialog box.