

**SEQUENCE STRUCTURE**

1. Draw a flowchart and write a program to Add two numbers given by the user
2. Draw a flowchart and write a program to calculate the area of a Rectangle
3. Draw a flowchart and write a program to calculate the area of a Circle
4. Draw a flowchart and write a program to calculate the area and perimeter of a Rectangle
5. Draw a flowchart and write a program to find the total and average of a student who has appeared for three subjects
6. Draw a flowchart and write a program to calculate the total resistance of a circuit if the two resistors are connected in series and connected in parallel
7. Draw a flowchart and write a program to find the third angle of a triangle if the two angles is given by the user
8. Draw a flowchart and write a program to convert meter to centimeter
9. Draw a flowchart and write a program to convert hour into minutes and seconds
10. Draw a flowchart and write a program to convert kilometer to yards
11. Draw a flowchart and write a program to convert centigrade temperature to farenhite temperature
12. Draw a flowchart and write a program to convert yards to meter and kilometer
13. Draw a flowchart and write a program to find the height of the ladder if the height of the wall and the angle of elevation is given by the user
14. Draw a flowchart and write a program to find the height of the wall if the height of the ladder and the inclination of the ladder from the ground is given by the user

15. Draw a flowchart and write a program , A dress takes 3 metes of cloth. Find the number of dresses can be made for N meters of Cloth
16. Draw a flowchart and write a program, A door takes 18 square feet of wood. Find out how many doors can be made from N square feet of wood
17. Draw a flowchart and write a program to convert seconds into Hour, Minute, Seconds
18. Draw a flowchart and write a program to convert centimeter to meter and Centimeter
19. Draw a flowchart and write a program, A shopkeeper gives one cap for every 12 bottles of cold drinks and a key ring for every 5 bottles of cold drinks. Find the number of caps and key rings received by a person for the purchase of N bottles of Cold drinks
20. Draw a flowchart and write a program, A person goes to Bank to withdraw certain amount of money. If the bank gives the change in Rs 5 and Re 1 find out how many 5 Rs note and how many 1 Re note the person receives
21. Draw a flowchart and write a program to find the different types of notes the person receives for any amount the person wants to withdraw
  - Rs 100
  - Rs 50
  - Rs 20
  - Rs 10
  - Rs 5
  - Rs 2
  - Re 1

**SELECTION STRUCTURE**

1. Draw a flowchart and write a program to check whether the person is eligible to vote or not
2. Draw a flowchart and write a program to check whether the person is rich or poor on his salary. If the salary is less than or equal to 10000 consider him poor else rich
3. Draw a flowchart and write a program to check whether the person will get commission on no commission on his Sales. If sales is greater than 50000 he will get commission else no commission.
4. Draw a flowchart and write a program to check whether a person is eligible to vote or not. If the person is not eligible to vote find out how many years he has to wait
5. Draw a flowchart and write a program to check whether the student has passed or failed on his marks. If the total is greater than or equal to 180 consider him Pass else Fail. The student appears for three subjects and his marks were recorded individually
6. Draw a flowchart and write a program to check whether the number is odd or even
7. Draw a flowchart and write a program to check whether the number is divisible by 5 or not
8. Draw a flowchart and write a program to check whether a year is a leap year or not
9. Draw a flowchart and write a program to check whether a number is odd or even. If the number is odd check whether the number is divisible by 7 or not
10. Draw a flowchart and write a program to check whether the person has made profit or loss or no profit no loss if the cost price and selling price is entered by the user
11. Draw a flowchart and write a program, Two persons are playing a game of Dice find out whether A has won the match or B has won the match or Game Drawn
12. Draw a flowchart and write a program to check whether the person has to retire or continue on the following conditions. If either the age is greater than 55 or his salary is greater than 15000 he has to retire else continue
13. Draw a flowchart and write a program to check whether the person will be insured or not on the following conditions. If either his salary greater than 10000 or his age is greater than 30 he has to retire else continue
14. Draw a flowchart and write a program to find out whether the person is below weight, normal weight or above weight if his weight is taken

- from the user. If the weight is less than 40 consider it as below weight, If it is more than 80 consider it as over weight, if the weight is between 40 to 80 both inclusive consider it as normal weight
15. Draw a flowchart and write a program to find out whether the day is cold day, normal day, or hot day if the temperature is taken from the user. If the temperature is less than 20 consider it as cold day, If it is more than 40 consider it as hot day, if the weight is between 20 to 40 both inclusive consider it as normal day
16. Draw a flowchart and write a program to find out whether the student has passed in first division, second division, third division or fail on his average. If the average is greater than or equal to 60 consider it as first division, if the average is greater than or equal to 45 consider it as second division, if the average is greater than or equal to 30 consider it as third division. If the average is less than 30 or any subject mark is less than 30 consider it as fail
17. Draw a flowchart and write a program to find out the greatest angle of the triangle if the angles is given by the user
18. Draw a flowchart and write a program to find out whether the year is a leap year or not. If the year is not a century year and the year is totally divisible by 4 it is a leap year but if the year is a century year then it should be properly divisible by 400 and not by 100
19. Draw a flowchart and write a program to find the bill for the telephone. The telephone charges Rs. 275 from all households and allows 100 units free. If the unit exceeds 100 Rs. 2.00 is charged for extra unit above 100 along with Rs. 275
20. Draw a flowchart and write a program to find the travelling allowance for a employee. The company gives the traveling allowance on the following table
 

Distance	Amount
$\leq 20$	Rs. 200
$> 20 \text{ \& } \leq 50$	Rs 200 + Rs 3 per extra kilometer above 20
$> 50 \text{ \& } \leq 100$	Rs 500 + Rs 3 per extra kilometer above 50
$> 100$	Rs 10 per kilometer
21. Draw a flowchart and write a program to find the hotel bill for a customer who stays in the hotel for n number of days. The charge is as follows
 

Type	Charge	Tax
1	Rs 800	----
2	Rs 1000	10%
3	Rs 1200	10%

4	Rs 2000	20%
22.	Draw a flowchart and write a program to find whether a person is child, teen, youth, or old on his age. If his age is less than 14 consider is as child, between 14 to 20 both inclusive teen, between 21 to 45 both inclusive youth and above 45 old	
23.	Draw a flowchart and write a program to find the car bill for a particular tourist	
Type of Car	Distance	Driver Charge
Maruti	<=100	Rs. 100 Rs 800
	>100 & <=200	Rs. 300 Rs 800+Rs.10/km above 100
	>200	Rs. 500 Rs. 15 per kilometer

**LOOPING STRUCTURE**

- Draw a flowchart and write a program to generate natural numbers between 1 to 20
- Draw a flowchart and write a program to generate odd numbers from 21 to 45
- Draw a flowchart and write a program to generate even numbers from 100 to 80
- Draw a flowchart and write a program to generate natural numbers upto n
- Draw a flowchart and write a program to generate multiples of 5 upto n
- Draw a flowchart and write a program to generate natural numbers between a given range
- Draw a flowchart and write a program to generate odd numbers between a given range
- Draw a flowchart and write a program to generate even numbers between a given range
- Draw a flowchart and write a program to generate n odd numbers starting from 1
- Draw a flowchart and write a program to sum the natural numbers between 1 to 10
- Draw a flowchart and write a program to sum the natural numbers between 1 to n
- Draw a flowchart and write a program to sum the odd numbers between a given range
- Draw a flowchart and write a program to generate the following series  
 > 1, 4, 9, 16, 25, ..... 100  
 > 1, 8, 27, 64, 125, ..... 1000  
 > 1, 10, 2, 9, 3, 8, 4, 7 ..... 10,1  
 > 1, 2, 4, 8, 16, ..... 1024
- Draw a flowchart and write a program to generate the following series  
 > Fibonacci Series 1, 1, 2, 3, 5, 8 ..... 144  
 > 1, 1, 1, 3, 5, 9, ..... 189
- Draw a flowchart and write a program to print your name five times
- Draw a flowchart and write a program to find the sum of the five numbers given by the user
- Draw a flowchart and write a program to find the average temperature of the week if the daily temperature is entered by the user
- Draw a flowchart and write a program to find the total and the average of the team if the match was played by 11 players and the runs were recorded individually of all the players played in the match
- Draw a flowchart and write a program to find the sum of the individual digits of a given number
- Draw a flowchart and write a program to find the product of the individual digits of a given number
- Draw a flowchart and write a program to check whether a given number is a Armstrong number or not
- Draw a flowchart and write a program to reverse a given number
- Draw a flowchart and write a program to check the given number is prime or not
- Draw a flowchart and write a program to find the largest number in the set of five numbers
- Draw a flowchart and write a program to find the highest temperature of the week if the daily temperature is entered by the user
- Draw a flowchart and write a program to find the highest maximum temperature and the highest minimum temperature of the week if the maximum and minimum daily temperature is entered by the user
- Draw a flowchart and write a program to find the highest and the lowest temperature of the week if the daily temperature is entered by the user

- |      |              |         |                          |
|------|--------------|---------|--------------------------|
| Sumo | <=100        | Rs. 100 | Rs 600                   |
|      | >100 & <=200 | Rs. 300 | Rs 600+Rs.8/km above 100 |
|      | >200         | Rs. 500 | Rs. 12 per kilometer     |
- Draw a flowchart and write a program to find whether a given number is a negative number, zero, positive number. If the number is positive check whether the number is odd or even. If the number is odd check whether the number is divisible by five or not. Display the suitable message for the given number
  - Draw a flowchart and write a program to enter three sides of a triangle and find out whether it is a equilateral, isosceles, scalene triangle
  - Draw a flowchart and write a program to find the status of the game. Two players are playing a game of dice. Each gets three chances alternatively. After three chance the computer has to display whether A has won the match or B has won the match or Game Drawn
  - Draw a flowchart and write a program to generate all the Armstrong numbers from 1 to 1000
  - Draw a flowchart and write a program to generate all the prime numbers from 1 to 100
  - Draw a flowchart and write a program to find the number of people eligible to vote and not eligible to vote in a colony of five people
  - Draw a flowchart and write a program to find the number of people who has to retire and how many can continue in a company of 10 employees. The condition of retiring is the age should be greater than 50
  - Draw a flowchart and write a program , In a company of 10 people generate a statistical report in the following format  

Age Group	Number of People
<=20	xx
>20 and <=30	xx
>30 and <=40	xx
>40 and <=50	xx
>50	xx
  - Draw a flowchart and write a program to find out how many people are under weight, normal weight, above weight in a colony of five people. If the weight is less than 40 it is underweight if it is greater than 80 it is overweight and if it is between 40 to 80 both inclusive it is normal weight
  - Draw a flowchart and write a program to find out how many students have got first division, second division, third division and fail in a class of five students. Each student has appeared for three subjects and his marks were recorded individually. The condition is  

Average >=60	First Division
Average >=45	Second Division
Average >=30	Third Division

 If any subject marks is less than 30 or the average is less than 30 consider it as fail
  - Draw a flowchart and write a program to generate the following pattern  

*	1	1
**	12	22
***	123	333
****	1234	4444
*****	12345	55555
  - Draw a flowchart and write a program to generate the following series  
 00  
 01  
 10  
 11
  - Draw a flowchart and write a program to generate the following series  
 000  
 001  
 010  
 011  
 100  
 101  
 110  
 111

39. Draw a flowchart and write a program to generate the multiplication table of a given number in the following format. If the input number is 2 then the output is

2 \* 1 = 2

2	*	2	=	4
2	*	3	=	6
:	:	:	:	:
2	*	10	=	20

**ARRAYS IN C++**

1. Draw a flowchart and write a program to enter five elements in the array and display the same
2. Draw a flowchart and write a program to enter five elements in the array and display them in the reverse order (LIFO)
3. Draw a flowchart and write a program to enter five elements in the array and display the first and the last element of the array
4. Draw a flowchart and write a program to enter five elements in the array and find the sum of all the elements entered in the array
5. Draw a flowchart and write a program to enter two arrays of five elements each and find the sum of the array such that  
 $C[1]=A[1]+B[1]$   
 $C[2]=A[2]+B[2]$   
 $\vdots$   
 $C[5]=A[5]+B[5]$
6. Draw a flowchart and write a program to enter two arrays of five elements each and find the sum of the array such that  
 $C[1]=A[1]+B[5]$   
 $C[2]=A[2]+B[4]$   
 $\vdots$   
 $C[5]=A[5]+B[1]$
7. Draw a flowchart and write a program to enter an array of five elements and display the positions which contains odd numbers
8. Draw a flowchart and write a program to enter five elements in an array and display all the odd numbers first and then all the even numbers
9. Draw a flowchart and write a program to enter five elements in an array and display the largest element in the array
10. Draw a flowchart and write the program to enter the daily temperature of the week and find the highest temperature of the week
11. Draw a flowchart and write the program to enter the daily temperature of the week and find the highest and the lowest temperature of the week. Also calculate the difference between the highest and the lowest temperature
12. Draw a flowchart and write a program to accept five numbers in an array and sort them in the ascending order
13. Draw a flowchart and write a program to accept five numbers in an array and sort them in the ascending order and find the highest element and the second highest element present in the array
14. Draw a flowchart and write a program to accept five numbers in an array and sort them in the descending order and find the highest element and the lowest element in the array also calculate the difference between the highest element and the lowest element in the array
15. Draw a flowchart and write a program to accept five numbers in an array and enter a search element and check whether the number is present in the array or not

16. Draw a flowchart and write a program to accept the run scored by all the batsman in a cricket match which was played by 11 players. Find the highest score and the lowest score of the innings, also calculate the total and average of the innings and find out how many of them have scored half century and how many of them has scored the century in the innings
17. Draw a flowchart and write a program to accept a 3x3 matrix and display the same in the matrix format
18. Draw a flowchart and write a program to accept a 3x3 matrix and display the smallest and the largest element present in the matrix
19. Draw a flowchart and write a program to accept a 3x3 matrix and count the number of odd elements and the number of even elements present in the matrix
20. Draw a flowchart and write a program to accept a 3x3 matrix and find the sum of all the columns separately and also calculate the sum of all the elements present in the matrix
21. Draw a flowchart and write a program to generate the matrix as given

a)	1	2	3	b)	1	0	0
	4	5	6		0	1	0
	7	8	9		0	0	1
c)	1	1	1				
	0	0	0				
	1	1	1				

22. Draw a flowchart and write a program to add two matrixes of 3x3 and store it in the third matrix
23. Draw a flowchart and write a program to transpose a given matrix
24. Draw a flowchart and write a program to generate a mirror matrix if the input is  

1	2	3
4	4	2
1	3	4

the output is  

3	2	1
2	4	4
4	3	1
25. Draw a flowchart and write a program to generate a mirror matrix if the input is  

1	2	3
4	4	2
1	3	4

the output is  

1	3	4
4	4	2
1	2	3

**FUNCTIONS IN C++**
**PASS BY VALUE**

1. Write a program to create a function for squaring a given number
2. Write a program to create a function for cubing a given number
3. Write a program to create a function for adding two integer numbers
4. Write a program to create a function for area of a rectangle
5. Write a program to create a function for finding the sum of the resistance connected in series. The number of resistors is two.
6. Write a program to create a function for squaring a number to solve the following equation  
 $S=A^2 + B^2 + 2*A*B$
7. Write a program to create a function for squaring and cubing a number to solve the following equation  
 $S=A^3 + B^3 + 2*A^2*B + 2*A*B^2$

**PASS BY REFERENCE**

1. Write a program to create a function for calculating the area of a circle
2. Write a program to create a function for calculating the simple interest for a given principal, rate and time
3. Write a program to create a function for calculating the compound interest for a given principal, rate and time
4. Write a program to create a function for calculating the value of x to the power of y

**STRUCTURES IN C++**

1. Write a program to Define a structure to accept Rollno, Name and Age for a record and Display the same
2. Write a program to Define a structure to accept Rollno, Name, Mark1 and Mark2 for a record and Display the Rollno, Name, Mark1, Mark2 and Total

3. Write a program to Define a structure to accept Rollno, Name and Age for two records and Display the same
4. Write a program to Define a structure to accept Empno, Name, Department, Designation, Salary of two employees and display the same
5. Write a program to Define a structure to accept details of five students, the details are Roll, Name, Class, Subject, Fees and display the same
6. Write a program to Define a nested structure. The main structure contains roll, name and age. The sub structure contains first name and the sur name. Enter a record and display the same
7. Write a program to Define a nested structure. The main structure contains empno, Name, Department, Designation, Datejoin, DateBirth.

The sub structure Date contains DD/MM/YYYY. Enter a record and display the same

8. Write a program to Define a nested structure. The main structure contains empno, Name, Department, Designation, Datejoin, DateBirth. The sub structure Date contains DD/MM/YYYY. Enter five records and display the same

9. Write a program to define two structures one contains the personal details of the employee and the other contains the salary details. Accept the details of an employee in two structures and display the same. The first structure contains employee number, name, department, designation. The second structure contains employee number, basic, dearness allowance, house rent allowance, and gross

**STRINGS IN C++**

1. Write a program to accept a name and display the same
2. Write a program to accept a name and find the number of characters in the given name
3. Write a program to accept a word and reverse a given word
4. Write a program to accept a word and count the number of 'a' in the given word
5. Write a program to accept a word and count the number of vowels in the given word
6. Write a program to accept a word and find the number of consonant and number of vowels present in the word
7. Write a program to accept a sentence and count the number of words, vowels, consonants present in the sentence
8. Write a program to accept a word and check whether it is palindrome or not
9. Write a program to accept a word and toggle the case of the word
10. Write a program to accept a sentence and find the length of the largest word in the sentence

**POINTERS IN C++**

1. Write a program to display the address of variable "A" whose value is 5
2. Write a program to display the address of variable "A" and variable "B" and the address of variable "C++" while adding two numbers taken from the user
3. Write a program to display the address of the variable "I" in generating the values of I from 1 to 10
4. Write a program to display the address of the variable N and I in generating the values from 1 to N
5. Write a program to accept five elements in an array and display the address and the value of each pocket present in the array
6. Write a program to accept five elements in an array and display the addresses and the pocket number which contains odd elements

**PASS BY REFERENCE**

1. Write a program to create a structure which will contain roll name and age. Accept the data in the main pass to the function and display the data from the function
2. Write a program to create a structure which will contain roll, name, mark1, mark2, mark3. Accept the details in the main. Pass the details to the function. Calculate the average and display the status of the student and display all the details from the function. If the average  $\geq 60$  consider it as first division, If the average  $\geq 45$  consider it as second division, If the average  $\geq 30$  consider it as third division else fail. If the student gets less than 30 in any subject he is considered as fail

3. Write a program to create a structure which will contain empno, name, basic, da, ta. Accept the details in the main pass it to the function and display the empno, name and total from the function
4. Write a program to create a structure, which will contain empno, name, basic. Accept the details in the main pass it to the function and calculate the DA, TA, HRA and the gross and display all the details from the function which will contain empno, name, basic, DA, TA, HRA and gross. DA, TA, HRA is 10%, 15%, 20% respectively

**MANIPULATORS**

1. Accept a Decimal number and convert it to its Hexadecimal Form and Octal Form
2. Accept a Octal Number and convert it to its Decimal form and hexadecimal form
3. Accept two octal numbers from the user and sum those two numbers
4. Accept an number from the user and display the number in the following format i.e., \*\*\*\*\*123

**CLASS & OBJECTS**

1. Display the message "Hi! You are getting the real taste of C++". The function which holds the message is
2. Create a class which will contain the variables and three methods accept, calculate and display for find the sum and average of a student who has appeared for three subjects
3. Create a class which will contain the variables and three methods accept, calculate and display for finding the values of sin, cos and tan for a given angle
4. Create a class which will contain the variables and three methods accept, calculate and display for finding the status of the student who has appeared for three subjects and his marks were recorded individually. In the calculation part it should display the total, average and the status. If average is greater than or equal to 40 consider him pass else fail.
5. Create a class which will contain the variables and three methods accept, calculate and display for finding the equivalent resistance for two resistors connected in series and parallel
6. Create a class, which will contain the variables and three methods accept, calculate and display for finding gross salary and net salary of the employee. The user feeds the basic salary, DA is 10% of basic salary, TA is 15% of the basic salary, and HRA is 20% of the basic

- salary. If the gross exceeds 8000 the tax is 10% of the extra amount above 8000
7. Create a class which will contain the variables and two methods calculate and display for finding the profit and profit percentage of an object if the cost price and the selling price is entered in the main function
8. Create a class which will contain the variables and two methods calculate and display for finding the total, average and status of the student. The student has appeared for three subjects. The status of the student has to be decided using the following table. If average  $\geq 60$  first division, average  $\geq 45$  second division, average  $\geq 30$  third division, average  $< 30$  fail. If the student gets less than 30 in any of the subject he is considered as fail
9. Create a class which will contain the variables and two methods accept and display for finding the square and cube of a given number. The calculation of the accepted number is done in the main function
10. Create a class which will contain the variables and two methods accept and display for finding the area and circumference of a circle. The calculation is done in the main function
11. Create a class which will contain the variables and two methods accept and display for finding the area and the perimeter of a square. The calculation is done in the main function.

12. Create a class which will contain the variables and two methods accept and display for finding the series of even numbers upto n
13. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the selling price of the item if the profit percentage and the cost price is entered by the user
14. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the simple interest for a given principal rate and time
15. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the final cost of building the house if the cost of the land, cost of bricks, cost of cement, cost of electrification, cost of interior decoration, cost of piping is accepted from the user
16. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the

- result should be done from main function for calculating the density of the body if the mass and the volume is accepted from the user
17. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the kinetic energy of the body if the mass, velocity is accepted from the user
18. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the height of the ladder if the height of the wall and the angle of inclination of the ladder is given by the user
19. Create a class, which will contain the variables and single method for calculation. The display of the result should be done from main function for calculating the average temperature of the week
20. Create a class, which will contain the variables and single method for calculation. The display of the result should be done from main function for calculating the total of a student who has appeared for 10 subjects and his marks were recorded individually

### **FUNCTION OVERLOADING**

1. Create a function-overloading program to calculate the area of a square, rectangle and trapezium. The program should have a menu

#### **Area Calculation Menu**

1. Area of Square
2. Area of Rectangle
3. Area of Trapezium

Enter your Choice \_\_\_\_\_

2. Create a function overloading program to calculate the sum and average of two numbers, three numbers and four numbers. The program should have a menu

#### **Sum and Average of Numbers**

1. Two Numbers
2. Three Numbers
3. Four Numbers

Enter your Choice \_\_\_\_\_

3. Create a function overloading program to calculate the equivalent resistance of the resistor connected in series and parallel for two, three, four resistors. The program should have a menu

#### **Equivalent Resistance**

1. Two resistors
2. Three resistors
3. Four resistors

Enter your Choice \_\_\_\_\_

4. Create a function overloading program to calculate the area of different geometric figures. Use the concept of function overloading where ever necessary

#### **Area of Different Geometric Figures**

1. Square
2. Circle
3. Rectangle
4. Trapezium
5. Rhombus

Enter your Choice \_\_\_\_\_

### **OPERATOR OVERLOADING**

1. Create a operator overloading program to use the '+' operator for adding two strings
2. Create a operator overloading program to use the '+' operator for adding two objects. The data present in object is the length and the breadth of the rectangle. The '+' operator should be used to calculate the total length and total breadth of both the rectangle
3. Create a operator overloading program to use '++' operator to increment the number by 2 instead of 1

### **CONSTRUCTOR**

1. Create a constructor which will initialize the values of the variable a= 5 and b=10 and display the values of a and b with a display function
2. Create a constructor, which will initialize the value of gravity as 9.8. The user enters the mass and the height to calculate the potential energy of the body
3. Create a constructor, which will initialize the value of pi as 3.1416. The user enters the radius and the area should be calculated.
4. Create a constructor which will initialize the value of time =6. The user enters the principal and the rate to its computer. Find the simple interest for the given principal and rate

### **INHERITANCE**

1. The base class contains the variables 'a' and 'b' and a function to accept both the variables. The derived class contains a variable 'c' and the functions to add, subtract, multiply and divide those two numbers and display the result
2. The base class contains the variables 'a' and 'b' and a function to accept both the variables. One derived class contains a function to calculate the area of a rectangle and display the result and the other derived class contains a function to calculate the perimeter of the rectangle and display the result
3. The base class contains the variables 'p' and 'r' and a function to accept both the variables. The derived class contains the variable t and a function to calculate the simple interest and display the result. There should be four derived classes for calculating for 1 year, 2 year, 3 year and 4 years
4. The base class contains a variable 'r' and a function to accept the radius from the user. The other base class contains a variable 'h' and a function to accept the height from the user. The derived contains a variable 'v' and a function to calculate the volume of the cylinder and display the result
5. The base class contains the marks of english, maths and hindi. The other base class contains the marks of physics, chemistry, biology. The derived class contains a function which can add all the numbers and find the total, average and the status of the student. The status of the student can be calculated using the following table

marks	status
>=60	first division
>=45	second division
>=30	third division

if a student gets less than 30 in any subject he is considered as fail

### **FILE HANDLING IN C++**

Try this Examples in the Text Mode as well as Binary Mode

1. Write a program to create a file and add a record. The structure of the file is Empno, Name, Department, Designation and salary

2. Write a program to create a file and add a record. The structure of the file is Accountno, name, type of account, amount.
3. Write a program to add a record to the file in question 2 only if the amount is greater than equal to 100
4. Write a program to create a file and add a record. The structure of the table is itemno, name, unitcost, reorderlevel, reorderquantity and stock
5. Write a program to add a record to the file in question 4
6. Write a program to display all the records from the file in question 4
7. Write a program to display all the records from the file in question 1
8. Write a program to display all the records from the file in question 4 whose stock is less than 10
9. Write a program to display all the records from the file in question 1 whose department is either computer or production
10. Write a program to display all the records from the file in question 1 whose department is given by the user
11. Write a program to display all the records from the file in question 1 whose department and designation is given by the user
12. Write a program to display the record from the file in question 2 whose account number is given by the user
13. Write a program to transfer all the records from the file in question 2 to another file adding the interest to the amount. The interest amount is .5% of the amount
14. Write a program to transfer all the records from the file in question 1 to another file changing the department to "information" whose department is "computer"
15. Write a program to delete a record depending on the emp no from the file in question 1

16. Write a program to delete a record depending on the account no from the file in question 2
17. Write a program to modify a record depending on the emp no from the file in question 1
18. Write a program to modify a record depending on the account no from the file in question 2
19. Write a program for a menu driven program

**Main Menu**

1. Create a File and add a Record
2. Add a record in the Existing File
3. Modifying a Record
4. Deleting a Record
5. Total Report of the Friends
6. Individual Report of the Friends
7. Report of all the Friends on City

Enter your Choice \_\_\_\_\_

The structure of file is Serial no, Name, Age, Address, City, Phone

20. Write a program for a menu driven program

Main Menu

1. Create a File and add a Record
2. Add a record in the Existing File
3. Modifying a Record
4. Deleting a Record
5. Total Report of the Employees
6. Individual Report of the Employee on Employee no
7. Report of all the Employee on a particular Department

Enter your Choice \_\_\_\_\_

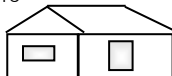
The structure of file is Employee number, name , department, designation, dateofjoin, Salary

**GRAPHICS IN C++**

1. Draw a line from 100,100 – 800,800
2. Draw a circle with radius of 100 in the quadrant 400,400
3. Draw concentric circles in the quadrant 400,400
4. Draw the figure



5. Draw the figure



- 6.



**Linked List in C++**

Main Menu

1. Create a Node
2. Add a node at the Beginning
3. Add a node at The End
4. Add a node in the Middle
5. Sort the link list
6. Search in Link list
7. Delete a node from the beginning
8. Delete a node from the middle
9. Delete a node from the End
10. Display the nodes
11. Modify a node in the Link list

Enter your Choice \_\_\_\_\_

The structure of a node is account number, name, amount