Question 1.



Question 2.



Question 3.

C:\Users\MANI\Pictures\Screenshots\Screenshot (5).png

Question 4.



Question 5.

A class **bill** is inherited by two classes **cheque, cash** in **protected mode**.

**bill** class has two members **item\_price,qty.**

The product of the two, 1. price of the item and 2. quantity will give us the **total bill**.

class **cheque** again has two members **cheque\_no, cheque\_amt**.

Write a member function to test whether the amount in the cheque clears the bill or not.

**if yes** put the word **"Clear" if no** put the balance amount as **"Balance=100" (100 is an example).**

**Similarly class cash** has 4 data members for the number of **notes of 500,100,10,1.**

**Total** is to be calculated from the notes and again **matched with the bill.**

If the bill is cleared with cash put the word **"Clear" if no** put the balance amount as **"Balance=100" (100 is an example).**

**Sample Input 1:**

1          // for cheque clearance

10        //item\_price

10        //qty

1234    //cheque\_no

80        // cheque\_amt

**Sample Output 1:**

100                  //bill [item\_price\*qty]

Balance=20     //pending=100-80=20

**Sample Input 1:**

2          //for cash payment

10        //item\_price

10        //qty

0          //notes of 500

0          //notes of 100

10        //notes of 10

0          //notes of 1

**Sample Output 1:**

Clear

Question 6.

A class **string1** allocates appropriate memory (using new operator) to a string

**passed from the main function**, and then decrypt the string, by subtracting 3 to

the ASCII value of each alphabet of the string.

**Sample Input:**

Deklodvkd

**Sample Output:**

Abhilasha

Question 7-

Given the following inheritance structure of classes that represents the student details, marks in 3 subjects and Result respectively, generate the sample output.



Question 8-

Write a program to enter basic information(name,empId,gender) and department information(dept name,assigned work,timetaken) for an employee and print the entire information using classes basicInfo, deptInfo  and employee classes.For Wrong values print "Wrong Input".

Constraint:

timetaken can't be zero or negative.

Sample Input:

rahul    //name  
101    //empID

m        //gender  
cse    //dept name  
dl    //assigned work  
45    //timetaken

Question 9-

 Write a program to calculate area of Square and Circle using classes Shape,Square and Circle.

Sample Input:

2

3

Sample Output:

Area of square: 4  
Area of circle: 28.26

Sample Output:

rahul  
101  
m  
cse  
dl  
4.5

Question 10 –

Write a program to calculate square and cube of a number N using classes Number,Square and Cube.

Constraint:

1<=N<=1000

Sample Input:

2

Sample Output:

Square of 2 is: 4  
Cube   of 2 is: 8

Question 11-

Write a program to calculate total result of a student by adding marks in two subjects and sports marks using classes Student,Sports,Test and Result.For wrong values print "Wrong Input".

Constraint:

all inputs are greater than 0

Sample Input:

2    //Roll Number  
3    // Marks in Sub 1  
4    //Marks in Sub 2

5    //Sports Marks

Sample Output:

Roll number 2  
Marks in sub1 3  
Marks in sub2 4  
Score 5  
total = 12

Question 12-

Write a program to calculate area of Square and Circle using classes Shape,Square and Circle.

Sample Input:

2

3

Sample Output:

Area of square: 4  
Area of circle: 28.26

Question 13-

Given the following inheritance structure of classes that represents the marks of one student in internal and external assessments of 3 subjects respectively and the Result class generates the rand total.



Sample Input:

12

34

56

10

20

30

Sample Output:

102

60

162

Question 14-

Base Class name bill has three data members: item\_code, price, total.

Class cash is derived from bill having deno, value,  num and cheque is also derived from bill having chec\_no,bank\_name as data members.

The customer is having an option to buy from cheque or cash.

Sample Input:

//Number of items

5

//itemcodes and prices

1

10

2

10

3

10

4

10

5

10

//Option Cheque/cash

2

//Num of Denominations

3

//1st Denomination

Rs. 100

//value of 1st Denomination

2

//2nd Denomination

Rs. 50

//value of 2nd Denomination

2

//3rd Denomination

Rs. 10

//value of 3rd Denomination

2

Sample Output:

//Total

50

notes=3

100

2

50

2

10

2