**HACKER RANK SOLUTIONS (JAVA 15)**

**CONTROL STATEMENTS**

**PROBLEM 1:**

**Salary Computation 3**

Danny has recently got his job offer as an Event Concept Creator at Sparsh Event Services. The Company has sent him a detailed salary structure with details of his basic salary, HRA and DA. The Company has promised to pay him as under:

If his basic salary is less than Rs. 15000, then HRA = 15% of basic salary and DA = 90% of basic salary.

If his basic salary is either equal to or above Rs. 15000, then HRA = Rs. 5000 and DA = 98% of basic salary.

If the Danny’s salary is given as input, write a program to find his gross salary, using method

***Note : Gross Salary = Basic Salary+HRA+DA\****

**Input Format**

First line of the input is an integer that corresponds to the basic salary of Danny.

**Constraints**

No Constraints

**Output Format**

Output should display the double value that refers to the gross salary of Danny. Display the output correct to 2 decimal places.

**Sample Input 0**

12000

**Sample Output 0**

24600.00

**Salary Computation 3**

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner (System.in);

Double Hra,Da;

int a = s.nextInt();

if(a<15000){

Hra = 0.15\*a;

Da = 0.90\*a;

Double gs = a+Hra+Da;

System.out.printf("%.2f",gs);

}

if(a>=15000){

Hra = 5000.00;

Da = 0.98\*a;

Double gs = a+Hra+Da;

System.out.printf("%.2f",gs);

}

}

}

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**PROBLEM 2:**

**Eligible for Placement 1**

College Management wants to separate the eligible students for their placement.so find the eligible students for the placement.

Notes:-

* If the students has 1 arrear and the cpga is above 70 - They are eligible for Placement.
* If the students has 1 or 2 arrear and the cpga is above 75 -They are eligible for Placement.
* Remaining students aren't eligible for Placement.

**Input Format**

input consists of one String and two integer.

**Constraints**

No constraints

**Output Format**

print the statement "Eligible for Placement" or "Not Eligible for Placement".

**Sample Input 0**

John

1

76

**Sample Output 0**

Name of the Student:John

John is Eligible for Placement

**Sample Input 1**

John

2

70

**Sample Output 1**

Name of the Student:John

John is Not Eligible for Placement

**Eligible for Placement 1**

**CODING:**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String a = s.nextLine();

int q = s.nextInt();

int d = s.nextInt();

System.out.println("Name of the Student:"+a);

if(q<=2&&d>=75){

System.out.println(a+" is Eligible for Placement");

}

else if(q==1 && d>=70){

System.out.println(a+" is Eligible for Placement");

}

else {

System.out.println(a+" is Not Eligible for Placement");

}

}

}

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**PROBLEM 3:**

**Account Balance 3**

Ramu after receiving his first salary decided to go to the bank to deposit his savings in his account. Before that, he does not know the process that is to be undertaken in the bank. Help him in understanding the process of depositing money and withdrawal of money. Use Switchcase to implement this concept

**Input Format**

First input corresponds to the account balance. Second input corresponds to the process to be carried out.

**Constraints**

No Constraints

**Output Format**

If the input is 1, the amount should be deposited. If the input is 2, the amount should be withdrawn and for other inputs display “Invalid Input”. If the amount to be withdrawn is greater than the balance, display “Insufficient Balance”.

**Sample Input 0**

1000

3

**Sample Output 0**

Invalid Input

**Sample Input 1**

2000

1

500

**Sample Output 1**

2500

**Sample Input 2**

200

2

2000

**Sample Output 2**

Insufficient Balance

**Account Balance 3**

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner (System.in);

int z = s.nextInt();

int x = s.nextInt();

if(x==1){

int v = s.nextInt();

int BA = z + v;

System.out.println(BA);

}

else if(x==2){

int v = s.nextInt();

if(v<z){

int BA = z-v;

System.out.println(BA);}

else {

System.out.println("Insufficient Balance");

}

}

else {

System.out.println("Invalid Input");

}

}

}

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**PROBLEM 4:**

**Vowels or Consonants 1**

Maya wants to know how to find whether the alphabet is Vowel or Consonant.could you please help her to find the alphabet is Vowel or Consonant.

**Input Format**

input consists of one Character.

**Constraints**

No Constraints

**Output Format**

print whether the character is Vowel or Consonant or Invalid Input.

**Sample Input 0**

A

**Sample Output 0**

The Character A is Vowel

**Sample Input 1**

T

**Sample Output 1**

The Character T is Consonant

**Sample Input 2**

u

**Sample Output 2**

The Character u is Vowel

**Vowels or Consonants 1**

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String m = s.next();

if(m.equals("A")||m.equals("a")||m.equals("U")||m.equals("u")||m.equals("I")||m.equals("i")||m.equals("E")||m.equals("e")||m.equals("O")||m.equals("o")){

System.out.println("The Character "+m+" is Vowel");

}

else{

System.out.println("The Character "+m+" is Consonant");

}

}

}

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**PROBLEM 5:**

**Grading System 20**

Dheena wants to know how the grading marks will works in education.could you please help him to learn the grading System. Note:-

100=Grade is S 90-99=Grade is A 80-89=Grade is B 70-79=Grade is C 60-69=Grade is D 50-59=Grade is E <50=Fail Get the subject marks from the user,then Find the average marks.Based on the average marks generate the Students grade marks.

**Input Format**

First input consists of String Second input consists of integer Third input consists of integer Fourth input consists of integer Fifth input consists of integer Sixth input consists of integer

**Constraints**

No Constraints

**Output Format**

execute the total Marks,average marks and Grade Mark

**Sample Input 0**

John

100

99

100

100

99

**Sample Output 0**

Name of the Student:John

Total Mark:498

Average Mark:99.6

Grade Mark:A

**Sample Input 1**

Nivi

30

30

30

30

30

**Sample Output 1**

Name of the Student:Nivi

Total Mark:150

Average Mark:30.0

Grade Mark:Fail

**Grading System 20**

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String a = s.next();

int f = s.nextInt();

int b = s.nextInt();

int c = s.nextInt();

int e = s.nextInt();

int g = s.nextInt();

System.out.println("Name of the Student:"+a);

System.out.println("Total Mark:"+(f+b+c+e+g));

Float d= (float)(f+b+c+e+g)/5;

System.out.printf("Average Mark:"+d+"\n");

if(d==100){

System.out.println("Grade Mark:S");

}

else if(99<=d&&d>=90)

System.out.println("Grade Mark:A");

else if(89<=d&&d>=80)

System.out.println("Grade Mark:B");

else if(79<=d&&d>=70)

System.out.println("Grade Mark:C");

else if(69<=d&&d>=60)

System.out.println("Grade Mark:D");

else if(59<=d&&d>=50)

System.out.println("Grade Mark:E");

else if(d<50)

System.out.println("Grade Mark:Fail");

}

}

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**PROBLEM 6:**

**Weekday Name from Number 2**

Write a program that takes a number from the user and generates an integer between 1 and 7. It displays the weekday name.

**Input Format**

Input consists of one integer.

**Constraints**

number 1 to 7

**Output Format**

Execute the day name of the given day number.If the given number is beyond the limit execute the statement"Enter a valid Number".

**Sample Input 0**

1

**Sample Output 0**

Monday

**Sample Input 1**

7

**Sample Output 1**

Sunday

**Sample Input 2**

14

**Sample Output 2**

Enter a valid Input

**Weekday Name from Number 2**

**CODING:**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

int a = s.nextInt();

switch(a){

case 1:

System.out.println("Monday");

break;

case 2:

System.out.println("Tuesday");

break;

case 3:

System.out.println("Wednesday");

break;

case 4:

System.out.println("Thursday");

break;

case 5:

System.out.println("Friday");

break;

case 6:

System.out.println("Saturday");

break;

case 7:

System.out.println("Sunday");

break;

default :

System.out.println("Enter a valid Input");

}

} }

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**PROBLEM 7:**

**Largest of Three Numbers 12**

write the program to find the Largest of Three Numbers using nested if-else

**Input Format**

consider 3 user input as a integer value.

**Constraints**

no constraints

**Output Format**

find the Largest of Three Numbers

**Sample Input 0**

10

60

70

**Sample Output 0**

c is largest then a and b

**Sample Input 1**

5

10

7

**Sample Output 1**

b is largest then a and c

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner (System.in);

int a = s.nextInt();

int b = s.nextInt();

int c = s.nextInt();

if(a>c&&a>b){

System.out.println("a is largest then b and c");

}

else if(b>c&&b>a){

System.out.println("b is largest then a and c");

}

else{

System.out.println("c is largest then a and b");

}

}

}

**PROBLEM 8:**

**Arithmetic Calculation-case 1**

Kumar wants to learn how the calculators are working.so he is trying to implements the calculator program.could you please help him to implements the program. - Notes:- Must use the Switch Case.operators - Addition - Subtraction - Multiplication - Division - Modulo

**Input Format**

First input consists of integer. Second input consists of integer. third input consists of character.

**Constraints**

No constraints

**Output Format**

print the calculation Value. if the symbol is not the arithmetic operator,print the statement is "Invalid Input".

**Sample Input 0**

3

4

+

**Sample Output 0**

Addition of two number is 7.0

**Sample Input 1**

8

9

&

**Sample Output 1**

Invalid Input

**Sample Input 2**

3

1

-

**Sample Output 2**

Subtraction of two number is 2.0

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

double num1 = sc.nextDouble();

double num2 = sc.nextDouble();

char op = sc.next().charAt(0);

switch(op) {

case '+':

System.out.println("Addition of two number is " + (num1 + num2));

break;

case '-':

System.out.println("Subtraction of two number is " + (num1 - num2));

break;

case '\*':

System.out.println("Multiplication of two number is " + (num1 \* num2));

break;

case '/':

if(num2 != 0)

System.out.println("Division of two number is " + (num1 / num2));

else

System.out.println("Division by zero is not allowed");

break;

case '%':

if(num2 != 0)

System.out.println("Modulo of two number is " + (num1 % num2));

else

System.out.println("Modulo by zero is not allowed");

break;

default:

System.out.println("Invalid Input");

}

}

}

**PROBLEM 9:**

**Check Number is Positive, Negative, or Zero**

write a program to Check the given Number is Positive, Negative, or Zero

**Input Format**

Get one integer value

**Constraints**

no constraints

**Output Format**

print whether it is Positive, Negative, or Zero

**Sample Input 0**

0

**Sample Output 0**

zero

**Sample Input 1**

12

**Sample Output 1**

positive

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner (System.in);

int a = s.nextInt();

if(a>0){

System.out.println("positive");

}

else if(a<0){

System.out.println("negative");

}

else{

System.out.println("zero");

}

}

}

**PROBLEM 10:**

**Check if given number is palindrome**

Write a program to Check if given number is 3 -digit and find it is palindrome

**Input Format**

Get a input as a integer value

**Constraints**

only 3 digit number

**Output Format**

print palindrome or not or invalid input

**Sample Input 0**

121

**Sample Output 0**

palindrome

**Sample Input 1**

234

**Sample Output 1**

not palindrome

**Sample Input 2**

72

**Sample Output 2**

Invalid Input

**CODING :**

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int num = sc.nextInt();

if(num < 100 || num > 999) {

System.out.println("Invalid Input");

} else {

int original = num;

int reversed = 0;

while(num > 0) {

int digit = num % 10;

reversed = reversed \* 10 + digit;

num /= 10;

}

if(reversed == original) {

System.out.println("palindrome");

} else {

System.out.println("not palindrome");

}

}

}

}