**Assignment – 5**

**(Switch Case and LOOP)**

Q1. Input Roll No, Name, and marks in five subjects. Calculate total and

percentage of marks. Calculate grade as follows :

>= 90%

Grade O

>=80%

Grade E

>=70%

Grade A

>=60%

Grade B

>=50%

Grade C

>=40%

Grade D

<40%

Fail

Generate a Mark Sheet.

**CODE**

import java.util.\*;

class Que1

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter name: ");

String na = sc.nextLine();

System.out.print("Enter roll number: ");

int r = sc.nextInt();

System.out.print("Enter C marks: ");

int c = sc.nextInt();

System.out.print("Enter JAVA marks: ");

int ja = sc.nextInt();

System.out.print("Enter DAA marks: ");

int daa = sc.nextInt();

System.out.print("Enter SE marks: ");

int se = sc.nextInt();

System.out.print("Enter OS marks: ");

int os = sc.nextInt();

int total = c+ja+daa+se+os;

double per = (total/500.0)\*100;

System.out.println("Name: "+na);

System.out.println("Roll: "+r);

System.out.println("C marks: "+c);

System.out.println("JAVA marks: "+ja);

System.out.println("DAA marks: "+daa);

System.out.println("SE marks: "+se);

System.out.println("OS marks: "+os);

System.out.println("Total marks: "+total);

System.out.println("Percentage: "+per+"%");

int d=(int)per/10;

switch(d)

{

case 9: System.out.println("Grade: O");

break;

case 8: System.out.println("Grade: E");

break;

case 7: System.out.println("Grade: A");

break;

case 6: System.out.println("Grade: B");

break;

case 5: System.out.println("Grade: C");

break;

case 4: System.out.println("Grade: D");

break;

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

break;

}

}

}

**OUTPUT**

**To Compile : javac Que1.java**

**To Run : java Que1**

**Output : Enter name: Neogi**

**Enter roll number: 471**

**Enter C marks: 78**

**Enter JAVA marks: 89**

**Enter DAA marks: 88**

**Enter SE marks: 78**

**Enter OS marks: 69**

**Name: Neogi**

**Roll: 315**

**C marks: 78**

**JAVA marks: 89**

**DAA marks: 88**

**SE marks: 78**

**OS marks: 69**

**Total marks: 402**

**Percentage: 80.4%**

**Grade: E**

**Q2. Input two numbers and one operator(+, -, \*, /) then calculate the result**

**according to the operator selected.**

**CODE**

import java.util.\*;

class Que2

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter first number: ");

int a = sc.nextInt();

System.out.print("Enter second number: ");

int b = sc.nextInt();

System.out.print("Enter operator: ");

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

switch(op)

{

case '\*':

System.out.println(a+" \* "+b+" = "+(a\*b));

break;

case '/':

System.out.println(a+" / "+b+" = "+(a/b));

break;

case '+':

System.out.println(a+" + "+b+" = "+(a+b));

break;

case '-':

System.out.println(a+" - "+b+" = "+(a-b));

break;

case '%':

System.out.println(a+" % "+b+" = "+(a%b));

break;

default:

System.out.println("Not a valid operator");

}

}

}

**OUTPUT**

**To Compile : javac Que2.java**

**To Run : java Que2**

**Output : Enter first number: 10**

**Enter second number: 5**

**Enter operator: \***

**10 \* 5 = 50**

**Q3. Input a number and display it in words. Ex- 5012(Five Zero One Two).**

**CODE**

import java.util.\*;

class Que3

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter number: ");

int n = sc.nextInt();

System.out.print(n+" in words - ");

int num=n,d,r=0;

while(n!=0)

{

d=n%10;

r=r\*10+d;

n=n/10;

}n=r;

while(n!=0)

{

d=n%10;

switch(d)

{

case 9: System.out.print("Nine ");

break;

case 8: System.out.print("Eight ");

break;

case 7: System.out.print("Seven ");

break;

case 6: System.out.print("Six ");

break;

case 5: System.out.print("Five ");

break;

case 4: System.out.print("Four ");

break;

case 3: System.out.print("Three ");

break;

case 2: System.out.print("Two ");

break;

case 1: System.out.print("One ");

break;

case 0: System.out.print("Zero ");

break;

}

n=n/10;

}

}

}

**OUTPUT**

**To Compile : javac Que3.java**

**To Run : java Que3**

**Output : Enter number: 5012**

**5012 in words - Five Zero One Two**

**Q4. Input a number and find the sum of all the digits.**

import java.util.\*;

class Que4

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter number: ");

int n = sc.nextInt();

int num=n,d,s=0;

while(n!=0)

{

d=n%10;

s=s+d;

n=n/10;

}

System.out.println("Sum of digit of "+num+" = "+s);

}

}

**OUTPUT**

**To Compile : javac Que4.java**

**To Run : java Que4**

**Output : Enter number: 12345**

**Sum of digit of 12345 = 15**

**Q5. In the above program count and print those digits from the result number**

**which are also present in the original number.**

**CODE**

import java.util.\*;

class Que5

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter Number: ");

int n = sc.nextInt();

int num=n,d1,d2,s=0,c;

while(n!=0)

{

d1=n%10;

s=s+d1;

n=n/10;

}

System.out.println("Sum of digit of "+num+" = "+s);

n=s;

while(n!=0)

{

d1=n%10;

c=0;

num=s;

while(num!=0)

{

d2=num%10;

if(d1==d2)

c++;

num=num/10;

}

if(c>0)

System.out.println(d1+" - "+c);

n=n/10;

}

}

}

**OUTPUT**

**To Compile : javac Que5.java**

**To Run : java Que5**

**Output : Enter Number: 12345**

**Sum of digit of 12345 = 15**

**5 - 1 1 – 1**

**Q6. Input 10 numbers and find out the largest and the smallest number without using array.**

**CODE**

import java.util.\*;

class Que6

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

int i, max, min;

System.out.println("Enter all numbers: ");

int n = sc.nextInt();

max=min=n;

for(i=1;i<10;i++)

{

//System.out.println("Enter a number: ");

n = sc.nextInt();

max=(n>max)?n:max;

min=(n<min)?n:min;

}

System.out.println("Maximum = "+max);

System.out.println("Minimum = "+min);

}

}

**OUTPUT**

**To Compile : javac Que6.java**

**To Run : java Que6**

**Output : Enter all numbers:**

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**10**

**Maximum = 10**

**Minimum = 1**