PENTAGON SPACE
Mastering The Future

Assignment Question

Conditions and If statements

Q1. Check whether the area of the rectangle is greater than the perimeter of the rectangle length = 5 breadth = 10

Hint : Area of rectangle = length * breadth

Hint : Perimeter of rectangle = 2 * (length + breadth)

In [ ]:
```
public class Duplicate {
    static int length = 5;
    static int breadth = 10;
    static int a_of_rect = length * breadth;
    static int p_of_rect = 2*(length + breadth);
    public static void main(String[] args) {
        if (a_of_rect > p_of_rect) {
            System.out.println("True");
            } else {
                System.out.println("False");
            }
    }

}
```

Q2. From the age of 3 people determine the oldest person among them.

> Age of first person = 25
> Age of second person = 34
> Age of third person = 45

In [ ]:
```
public class oldest_person {
    static int x = 25;
    static int y = 34;
    static int z = 45;
    public static void main(String[] args) {
        if (x>y & x>z) {
            System.out.println("First Person");
            } else if (y>x & y>z) {
                System.out.println("Second Person");
            } else{
            System.out.println("Third Person");
        }
    }

}
```

Q3. Write a Java program to divide them into three groups, Based on the users age.

Group 1 : Age <18 , Minors who are not eligible to work
Group 2 : 18<Age<60 , ELigible to work
Group 3 : >60, Too old to work as per govt. regulations.

In [ ]:
```
import java.util.Scanner;
class Age {
    public static void main(String[] args){
        int num;
        System.out.println("Enter the Age: ");
        Scanner s = new Scanner(System.in);
        num = s.nextInt();
        if (num<18){
            System.out.println("not eligible to work");
        }else if (num>18 & num<60){
            System.out.println("ELigible to work");
        }else{
            System.out.println("Too old to work as per govt. regulations.");
        }
    }
}
```

Q4. Write a Java program to check whether an alphabet is a vowel or consonant.

Sample TestCase:

Input:

```
k
```

Output:

```
consonant
```

In [ ]:
```
import java.util.*;
class Char {
    public static void main(String[ ] arg)
    {
    int i=0;
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter a character : ");
    char ch=sc.next( ).charAt(0);
    switch(ch)
    {
     case  'a' :
     case 'e'  :
     case 'i'   :
     case 'o'  :
     case 'u'  :
     case  'A' :
     case 'E'  :
     case 'I'   :
     case 'O'  :
     case 'U'  :i++;
    }
    if(i==1)
    System.out.println("Entered character "+ch+" is  Vowel");
    else
        if((ch>='a'&&ch<='z')||(ch>='A'&&ch<='Z'))
        System.out.println("Entered character "+ch+" is Consonent");
    }
}
```

Q5. A company decided to give bonus of 5% to employee if his/her year of service is more than 5 years.

Sample TestCase:

Input:

> Salary = 102893
> year = 6

Output:

> 108037.65

In [ ]:

```java
import java.util.*;
class Bonus {
    private static Object total_bouns;

    public static void main(String[] arg){
        Scanner sc= new Scanner(System.in);
        System.out.print("Enter Salary- ");
        int salary= sc.nextInt();
        System.out.print("Enter Year- ");
        int year= sc.nextInt();
        if (year>5){
            double per = salary * (0.5);
            double total_bonus = per + salary;
            System.out.println(total_bonus);
        }else {
            System.out.println(salary );

        }
    }
}
```