Day 16

Java is statically typed language, because (data stored in compile time.) Date: 25/01/25

- Java has a non-primitive version of all primitive data types, which is known as wrapper class.
- To fetch the range of any data type we can use the following variables.

(i) Data_Type.MIN_VALUE;
(ii) Data_Type.MAX_VALUE;

A java program to get the range of int data type using wrapper class.

eg: →

```
main()
{
    int min = Integer.MIN_VALUE;
    int max = Integer.MAX_VALUE;
    System.out.println("min: "+min);
    System.out.println("max: "+max);
}
```

Imp → To calculate which type used to store output.

Formula: → O/P data = (int (default) data_types--1 ---- data_types--n)

Take the bigger data type. & store in that data type.

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Imp: → ($)

$ is used to represent (Resemble) inner classes & inner interfaces in java.

Eg: →

```
class Demo
{
    class InnerDemo
    {

    }
}
```

Step 1: javac Demo.java

then 2 class generated.

① Demo.class

② Demo$InnerDemo.class.

"_" is used to resemble spaces in java.

Imp → when to use

① a=a+1 → equal and Add

② a+=1; → compound Assignment

whenever we want to store variable in same type of return then we should use compound assignment operator otherwise use simple ~~Arithmetic~~ assignment operator.

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Q28) WAP to ~~with~~ check whether student is pass or Not?

→
```
import java.util.Scanner;
class Q28MarksPassAndFail
{
    public static void main (String args[])
    {
        System.out.println("\nEnter Marks:");
        float marks = new Scanner(System.in).nextFloat();
        float per = (marks * 100.0f) / 600.0f;
        System.out.println("Percentage :" +
                String.format("%.2f", per));

        System.out.println (per>100)?("wrong input")
            : (per<=100 && per>=75)?("Grade A"):
              (per<75 && per>=60)?("Grade B"):
              (per<60 && per>=35)?("Grade C"):
              ("Fail")));
    }
}
```

Q29) WAP to accept input from user of months and display if it is in winter, summer, monsoon.

→
```
import java.util.Scanner;
class Q29Months
{
    Public static void main (String args[])
    {
        System.out.println("\nEnter Month:");
        String mon = new Scanner(System.in).next();
        System.out.println(mon.equalsIgnoreCase("OCT")||
        mon.equalsIgnoreCase("DEC")||mon.equalsIgnore
                                    case("JAN"))
```

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```
)? ("Winter"):
(mon.equalsIgnoreCase("FEB")|| mon.equalsIgnoreCase
("MAR")|| mon.equalsIgnoreCase("APR")|| mon.equalsIgnore
Case("MAY"))?("Summer"):(mon.equalsIgnoreCase(
"JUN")|| mon.equalsIgnoreCase("AUG")|| mon.equalsCase(
"SEP"))?("Monsoon"):("Wrong Month"));
    }
}
```

Q30) WAP to design simple calculator.

→

```
import java.util.Scanner;
class Q30CalculateEx
{
    public static void main(String args[])
    {
        System.out.println("\nEnter First Number:");
        Scanner sc = new Scanner(System.in);
        float num1 = sc.nextFloat();
        System.out.println("\nEnter Second Number:");
        float num2 = sc.nextFloat();
        System.out.println("\nEnter Operator:");
        char ch = sc.next().charAt(0);
        float opt = 0;
        System.out.println(
            ((ch=='+'||ch=='-'||ch=='*'||ch=='/'||ch=='%')?
        ((ch='+')?("\n"+num1+" "+ch+" "+num2+"="
        +(opt=num1+num2)):
        ((ch=='-')?("\n"+num1+" "+ch+" "+num2+"="+
            (opt=num1+num2)):
        ((ch=='*')?("\n"+num1+" "+ch+" "+num2+"="+
            (opt=num1*num2)):
```

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```
(ch=='/'?("\n"+num1+" "+ch+" "+num2+"="+
(opt=num1/num2)):
("\n"+num1+" "+ch+" "+num2+"="+
(opt=num1%num2))):("\n wrong operator"));
```

}

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