CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING

PGDAC March 2023(A)

CONCEPT OF PROGRAMMING

ASSIGNMENT – 1

Submitted To:

Ms. Anu Mahajan

(PGDAC Coordinator)

Submitted By:

Naman Verma

(230109372)

Q1. WAP to demonstrate ternary operator. define a variable mark and ask its value from user and using ternary operator check if marks > 40 store "Pass" in result variable else store "Fail".

Ans.

Source Code:

```
import java.util.Scanner;

class Assignment {
  public static void main(String[] args) {

    // take input from user
    Scanner S = new Scanner(System.in);
    System.out.println("Enter your marks: ");
    int marks = S.nextInt();
    // if marks is greater than 40
    String result = (marks > 40) ? "PASS" : "FAIL";
    System.out.println("You " + result + " the exam.");
  }
}
```

Output:

```
Enter your marks:
75
You PASS the exam.
```

Q2. Using ternary check if number entered by user is positive or negative.
In case number is positive store "Positive number" else store negative number to Result variable.

Ans.

Source Code:

```
import java.util.Scanner;

class Assignment {
  public static void main(String[] args) {
                int num;
                Scanner s= new Scanner(System.in);
                System.out.println("Enter the number");
                //enter the number you want to check
                num=s.nextInt();
                String result;
               result = (num > 0) ? "Positive number" :
"Negative number";
               System.out.println("The number " + num + "
is " + result);
                }
  }
```

Output:

```
Enter the number
-2
The number -2 is Negative number
```

Q3. WAP to ask name, age and salary of an employee and print on console.

Ans.

Source Code:

```
import java.util.Scanner;

class Assignment {
  public static void main(String[] args) {
                String name;
                int age;
                double salary;
                Scanner s= new Scanner(System.in);
                System.out.println("Enter your Name");
                //enter the name of employee
                name=s.nextLine();
                //enter the age of employee
                System.out.println("Enter your Age");
                age=s.nextInt();
                //enter the salary of employee
                System.out.println("Enter your Salary");
                salary=s.nextDouble();

               System.out.println("Welcome" + name + " "
                     +" Your age is: " + age + " "
                     +"Your salary is Rs.:"+ salary);
               }
  }
```

Output:

```
Enter your Name
Naman Verma
Enter your Age
26
Enter your Salary
125000.47
Welcome Naman Verma  Your age is: 26 Your salary is
Rs.:125000.47
```

Q4. WAP that ask two numbers from user and print greater number among two.

Ans.

Source Code:

```
import java.util.Scanner;

class Assignment {
  public static void main(String[] args) {

                int a,b;
                Scanner s= new Scanner(System.in);
                System.out.println("Enter your First
Number");
                //enter the first number
                a=s.nextInt();
                //enter the second number
                System.out.println("Enter your Second
Number");
                b=s.nextInt();
                if (a>b)
               System.out.println("Greater Number is:"+a);
                else
                System.out.println("Greater Number
is:"+b);

               }
  }
```

Output:

```
Enter your First Number
12
Enter your Second Number
5
Greater Number is:12
```

Q5. WAP to ask product name and price of product from user and calculate discount i.e.
if price > 2000 then discount is 10 percent of price
else
discount is 7 % of price.

Ans.

Source Code:

```
import java.util.Scanner;
class Assignment {
  public static void main(String[] args) {
  String prname;int price;double discount,finalprice;
  Scanner s= new Scanner(System.in);
                System.out.println("Enter the Product
Name");//enter the product name
                prname=s.nextLine();
                System.out.println("Enter the Product
Price");//enter the product price
                price=s.nextInt();
                if (price>2000){
                discount=0.10; finalprice=price-
(price*discount); //getting discount of 10%
               System.out.println("Your Price for
"+prname+ "is" + "Rs." +finalprice);}
                else if (price<2000){
               discount=0.07; finalprice=price-
(price*discount); //getting discount of 7%
               System.out.println("Your Price for
"+prname+ "is" + "Rs." +finalprice); }  } }
```

Output:

```
Enter the Product Name
Table
Enter the Product Price
1500
Your Price for TableisRs.1395.0
```

Q6. WAP to swap two numbers.

Ans.

Source Code:

```
import java.util.Scanner;
class Assignment {
  public static void main(String[] args) {
       int num1,num2,num3; //num3 used to swap values of
numbers
       Scanner s=new Scanner(System.in);
                System.out.println("Enter First
Number");//enter the first number
                num1=s.nextInt();
                System.out.println("Enter Second
Number");//enter the second number
                num2=s.nextInt();
               //swapping values of both numbers
               num3=num1;
               num1=num2;
               num2=num3;
                System.out.println("Now First Number is
"+num1);
                System.out.println("Now Second Number is
"+num2);
                }
  }
```

Output:

```
Enter First Number
25
Enter Second Number
50
Now First Number is 50
Now Second Number is 25
```

Q7. WAP to swap two numbers without using third variable.

Ans.

Source Code:

```
import java.util.Scanner;
class Assignment {
  public static void main(String[] args) {
       int num1,num2;
       Scanner s=new Scanner(System.in);
                System.out.println("Enter First
Number");//enter the first number
                num1=s.nextInt();
                System.out.println("Enter Second
Number");//enter the second number
                num2=s.nextInt();
               //swapping values of both numbers without
using third variable
               num1=num1+num2;
               num2=num1-num2;
               num1=num1-num2;
                System.out.println("Now First Number is
"+num1);
                System.out.println("Now Second Number is
"+num2);
                }
  }
```

Output:

```
Enter First Number
65
Enter Second Number
99
Now First Number is 99
Now Second Number is 65
```

Q8. WAP to check is number is even or odd.

Ans.

Source Code:

```
import java.util.Scanner;
class Assignment {
  public static void main(String[] args) {
       int num;
                Scanner s=new Scanner(System.in);
                 System.out.println("Enter Your
Number");//enter the number
               num=s.nextInt();
               if(num%2==0)
                 System.out.println("Your Number is EVEN");
               else
                 System.out.println("Your Number is ODD");
                 }
  }
```

Output:

```
Enter Your Number
36
Your Number is EVEN
```

Q9. A school has following rules for grading system:

a. Below 25 - F

b. 25 to 45 - E

c. 45 to 50 - D

d. 50 to 60 - C

e. 60 to 80 - B

f. Above 80 - A

Ask user to enter marks and print the corresponding grade.

Ans.

Source Code:

```
import java.util.Scanner;
class Assignment {
  public static void main(String[] args) {
       int marks;
                Scanner s=new Scanner(System.in);
                  System.out.println("Please enter the
marks");//enter the marks
               marks=s.nextInt();
               if(marks>80)
                  System.out.println("Your Grade is A");
               else if(marks>60 && marks<=80)
                  System.out.println("Your Grade is B");
               else if(marks>50 && marks<=60)
                  System.out.println("Your Grade is C");
               else if(marks>45 && marks<=50)
                  System.out.println("Your Grade is D");
               else if(marks>=25 && marks<=45)
                  System.out.println("Your Grade is E");
               else if(marks<25)
                  System.out.println("Your Grade is F"); }
}
```

Output:

```
Please enter the marks
28
Your Grade is E
```

Q10. WAP to check greater number among three numbers.

Ans.

Source Code:

```
import java.util.Scanner;
class Assignment
{
public static void main(String[] args)
{
int a, b, c, largest, temp;
Scanner s = new Scanner(System.in);
//reading input from the user
System.out.println("Enter the first number:");
a = s.nextInt();
System.out.println("Enter the second number:");
b = s.nextInt();
System.out.println("Enter the third number:");
c = s.nextInt();
//comparing a and b and storing the largest number in a
temp variable
temp=a>b?a:b;
//comparing the temp variable with c and storing the
result in the variable
largest=c>temp?c:temp;
//prints the largest number
System.out.println("The largest number is: "+largest);
}
}
```

Output:

```
Enter the first number:
15
Enter the second number:
45
Enter the third number:
75
The largest number is: 75
```

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