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Batch 31

OOP

Practical 5

Q- **if-else statements:-**

- : Write a program that checks if a given integer is even or odd.
- : Check if a person is eligible to vote based on their age.
- : Determine if a number is positive, negative, or zero.
- .
  An Insurance company follows following rules to calculate
  premium.

  (1) If a person's health
  is excellent and the person is between 25 and 35 years of age and lives in a
  city and is a male then the premium is Rs. 4000 and his policy amount cannot
  exceed Rs. 2 lakhs.

  (2) If a person satisfies
  all the above conditions except that the sex is female then the premium is Rs.
  3000 and her policy amount cannot exceed Rs. 1 lakh.

  (3) If a person's health
  is poor and the person is between 25 and 35 years of age and lives in a village
  and is a male then the premium is Rs. 6000 and his policy cannot exceed Rs.
  10,000.

  (4) In all other cases the
  person is not insured.

  Write a program to output
  whether the person should be insured or not, his/her premium rate and maximum
  amount for which he/she can be insured.

Switch case:-

- Write a program that prints the name of the day based on the number entered (1 for Monday, 2 for Tuesday, etc.).
- Write a program that prints the name of the month based on the number entered (1 for January, 2 for February, etc.).

- .

  Calculate Restaurant
  Bill for below menu . GST=12%.

  Ask user to enter quantity
  and item and generate bill.

Code:

```
// import java.util.Scanner;


// public class prac_5 {
//     public static void main(String[] args) {
//         Scanner scanner = new Scanner(System.in);


//         System.out.print("Enter person's health (excellent/poor): ");
//         String health = scanner.nextLine();


//         System.out.print("Enter person's age: ");
//         int age = scanner.nextInt();


//         System.out.print("Enter person's location (city/village): ");
//         String location = scanner.next();


//         System.out.print("Enter person's gender (male/female): ");
//         String gender = scanner.next();


//         int premium = 0;
//         int maxAmount = 0;


//         if (health.equals("excellent") && age >= 25 && age <= 35 && location.equals("city") &&
gender.equals("male")) {
//             premium = 4000;
//             maxAmount = 200000;
```

```
//        } else if (health.equals("excellent") && age >= 25 && age <= 35 && location.equals("city") &&
gender.equals("female")) {
//            premium = 3000;
//            maxAmount = 100000;
//        } else if (health.equals("poor") && age >= 25 && age <= 35 && location.equals("village") &&
gender.equals("male")) {
//            premium = 6000;
//            maxAmount = 10000;
//        } else {
//            System.out.println("The person is not insured.");
//            return;
//        }

//        System.out.println("The person should be insured.");
//        System.out.println("Premium rate: Rs. " + premium);
//        System.out.println("Maximum amount for insurance: Rs. " + maxAmount);
//    }
// }

import java.util.Scanner;

public class prac_5 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number (1-7) to get the name of the day: ");
        int dayNumber = scanner.nextInt();

        String dayName = "";
        switch (dayNumber) {
            case 1:
                dayName = "Monday";
```

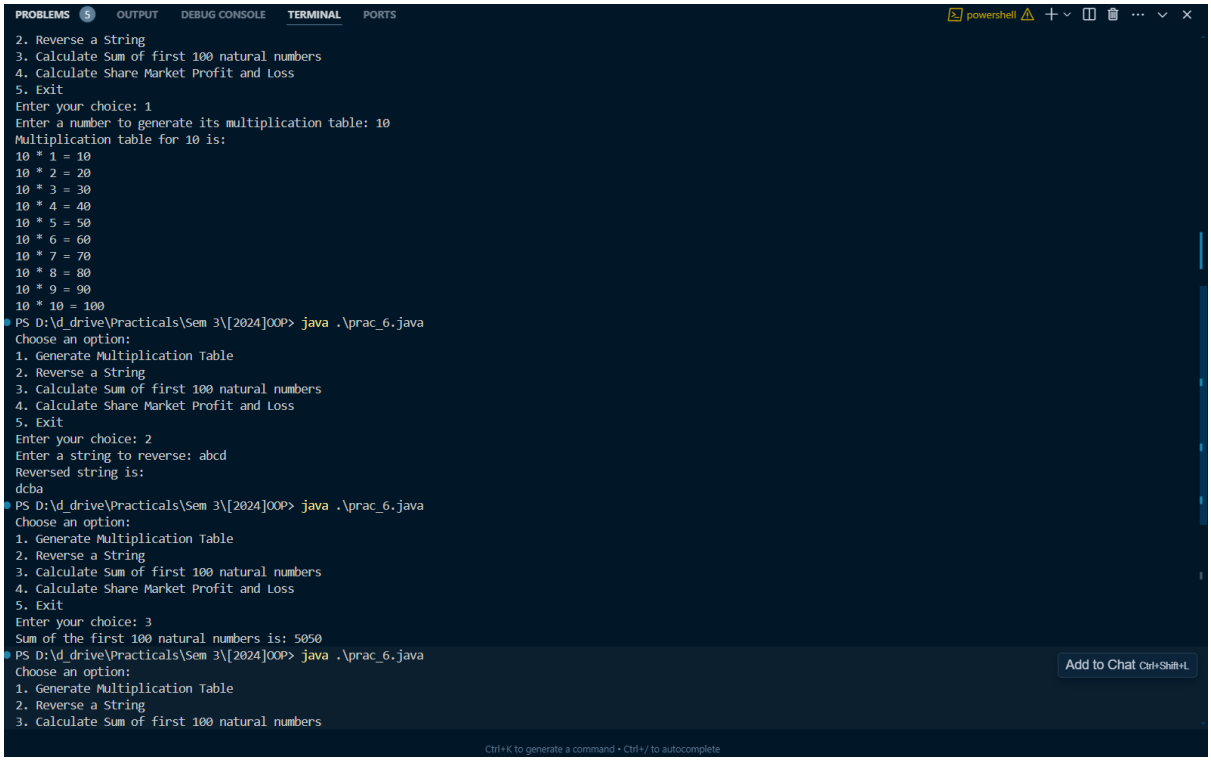
```
        break;
    case 2:
        dayName = "Tuesday";
        break;
    case 3:
        dayName = "Wednesday";
        break;
    case 4:
        dayName = "Thursday";
        break;
    case 5:
        dayName = "Friday";
        break;
    case 6:
        dayName = "Saturday";
        break;
    case 7:
        dayName = "Sunday";
        break;
    default:
        System.out.println("Invalid day number.");
        return;
}

System.out.println("The name of the day is: " + dayName);

System.out.print("Enter a number (1-12) to get the name of the month: ");
int monthNumber = scanner.nextInt();

String monthName = "";
switch (monthNumber) {
```

```
case 1:
   monthName = "January";
   break;
case 2:
   monthName = "February";
   break;
case 3:
   monthName = "March";
   break;
case 4:
   monthName = "April";
   break;
case 5:
   monthName = "May";
   break;
case 6:
   monthName = "June";
   break;
case 7:
   monthName = "July";
   break;
case 8:
   monthName = "August";
   break;
case 9:
   monthName = "September";
   break;
case 10:
   monthName = "October";
   break;
case 11:
```

```
        monthName = "November";
        break;
    case 12:
        monthName = "December";
        break;
    default:
        System.out.println("Invalid month number.");
        return;
}

System.out.println("The name of the month is: " + monthName);

System.out.println("Enter the quantity and item name to generate the bill:");
System.out.print("Quantity: ");
int quantity = scanner.nextInt();
System.out.print("Item: ");
String item = scanner.next();

double price = 0;
switch (item.toLowerCase()) {
    case "burger":
        price = 150;
        break;
    case "pizza":
        price = 300;
        break;
    case "sandwich":
        price = 100;
        break;
    default:
        System.out.println("Invalid item.");
```

```
            return;
        }

        double totalAmount = price * quantity;
        double gst = totalAmount * 0.12;
        double discount = 0;

        if (quantity > 5 && item.equalsIgnoreCase("burger")) {
            discount = totalAmount * 0.1;
        } else if (totalAmount > 1000) {
            discount = totalAmount * 0.15;
        } else if (totalAmount > 500) {
            discount = totalAmount * 0.2;
        }

        double finalAmount = totalAmount + gst - discount;

        System.out.println("Bill Details:");
        System.out.println("Item: " + item);
        System.out.println("Quantity: " + quantity);
        System.out.println("Price per item: Rs. " + price);
        System.out.println("Total amount: Rs. " + totalAmount);
        System.out.println("GST (12%): Rs. " + gst);
        System.out.println("Discount: Rs. " + discount);
        System.out.println("Final amount: Rs. " + finalAmount);
    }
}
```

Output:


PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS
powershell
2. Reverse a String
3. Calculate Sum of first 100 natural numbers
4. Calculate Share Market Profit and Loss
5. Exit
Enter your choice: 1
Enter a number to generate its multiplication table: 10
Multiplication table for 10 is:
10 * 1 = 10
10 * 2 = 20
10 * 3 = 30
10 * 4 = 40
10 * 5 = 50
10 * 6 = 60
10 * 7 = 70
10 * 8 = 80
10 * 9 = 90
10 * 10 = 100
PS D:\d_drive\Practicals\Sem 3\[2024]OOP> java .\prac_6.java
Choose an option:
1. Generate Multiplication Table
2. Reverse a String
3. Calculate Sum of first 100 natural numbers
4. Calculate Share Market Profit and Loss
5. Exit
Enter your choice: 2
Enter a string to reverse: abcd
Reversed string is:
dcba
PS D:\d_drive\Practicals\Sem 3\[2024]OOP> java .\prac_6.java
Choose an option:
1. Generate Multiplication Table
2. Reverse a String
3. Calculate Sum of first 100 natural numbers
4. Calculate Share Market Profit and Loss
5. Exit
Enter your choice: 3
Sum of the first 100 natural numbers is: 5050
PS D:\d_drive\Practicals\Sem 3\[2024]OOP> java .\prac_6.java
Choose an option:
1. Generate Multiplication Table
2. Reverse a String
3. Calculate Sum of first 100 natural numbers
Add to Chat Ctrl+Shift+L
Ctrl+K to generate a command • Ctrl+/ to autocomplete