EIT Assignment 1

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Section: A3

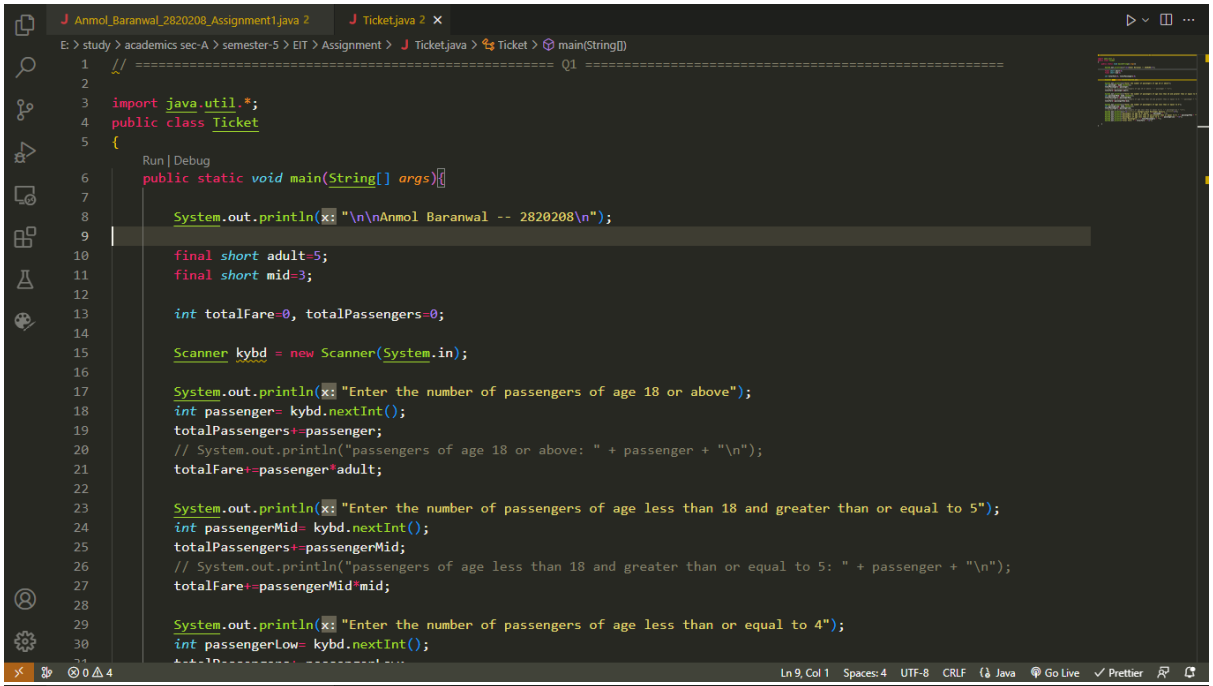
Q1. Write a Java code which takes as input the number of people of various age group and print a ticket. At the end of the journey state the number of passengers of different age group who travelled and total amount received as collection of fares.

JAVA Code

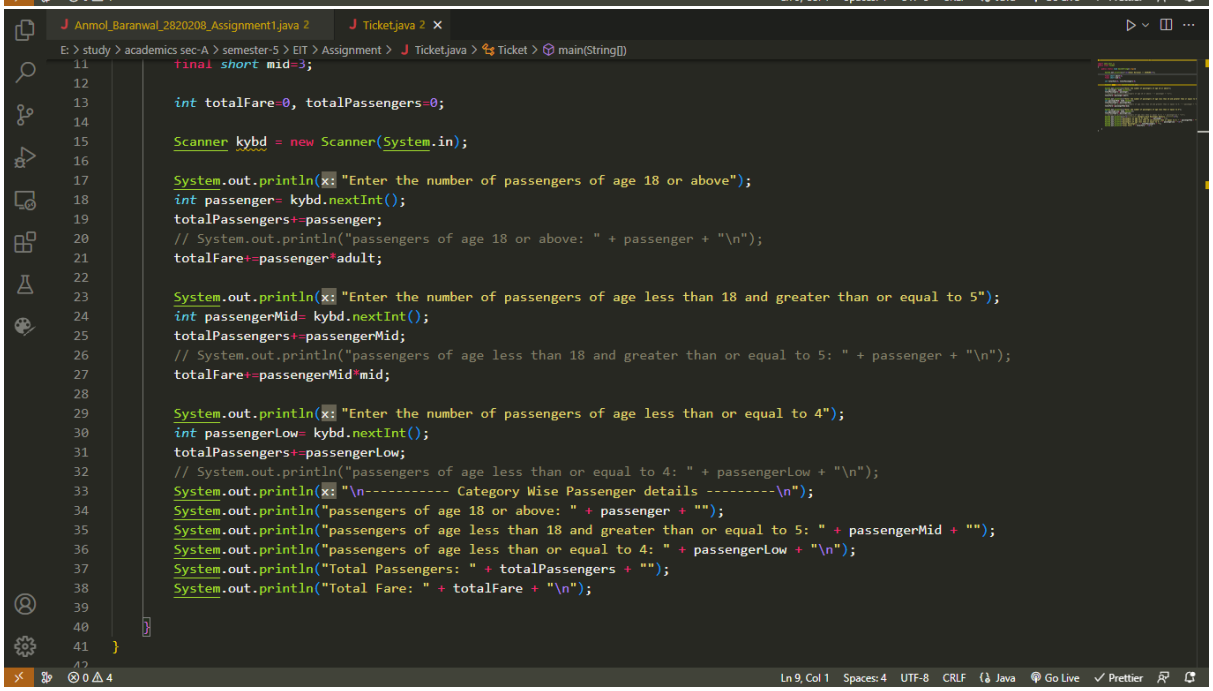
```
import java.util.*;

public class Ticket

{

   public static void main(String[] args){


      System.out.println("\n\nAnmol Baranwal -- 2820208\n");


      final short adult=5;

      final short mid=3;


      int totalFare=0, totalPassengers=0;


      Scanner kybd = new Scanner(System.in);


      System.out.println("Enter the number of passengers of age 18 or above");

      int passenger= kybd.nextInt();

      totalPassengers+=passenger;

      // System.out.println("passengers of age 18 or above: " + passenger + "\n");
```

```
        totalFare+=passenger*adult;


        System.out.println("Enter the number of passengers of age less than 18 and greater than or equal to 5");
        int passengerMid= kybd.nextInt();
        totalPassengers+=passengerMid;
        // System.out.println("passengers of age less than 18 and greater than or equal to 5: " + passenger + "\n");
        totalFare+=passengerMid*mid;


        System.out.println("Enter the number of passengers of age less than or equal to 4");
        int passengerLow= kybd.nextInt();
        totalPassengers+=passengerLow;
        // System.out.println("passengers of age less than or equal to 4: " + passengerLow + "\n");
        System.out.println("\n---------- Category Wise Passenger details ---------\n");
        System.out.println("passengers of age 18 or above: " + passenger + "");
        System.out.println("passengers of age less than 18 and greater than or equal to 5: " + passengerMid + "");
        System.out.println("passengers of age less than or equal to 4: " + passengerLow + "\n");
        System.out.println("Total Passengers: " + totalPassengers + "");
        System.out.println("Total Fare: " + totalFare + "\n");


    }
}
```

JAVA Code Screenshot

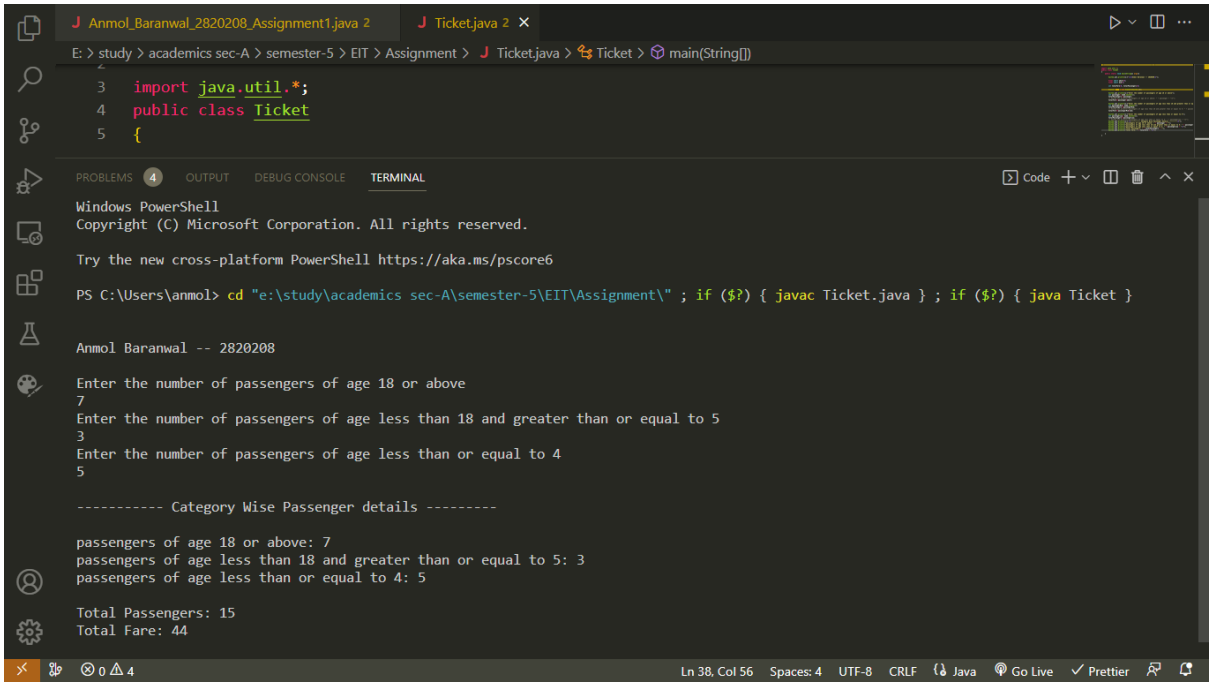


```java
// ================================================== Q1 ==================================================

import java.util.*;
public class Ticket
{
    Run | Debug
    public static void main(String[] args){

        System.out.println(x: "\n\nAnmol Baranwal -- 2820208\n");

        final short adult=5;
        final short mid=3;

        int totalFare=0, totalPassengers=0;

        Scanner kybd = new Scanner(System.in);

        System.out.println(x: "Enter the number of passengers of age 18 or above");
        int passenger= kybd.nextInt();
        totalPassengers+=passenger;
        // System.out.println("passengers of age 18 or above: " + passenger + "\n");
        totalFare+=passenger*adult;

        System.out.println(x: "Enter the number of passengers of age less than 18 and greater than or equal to 5");
        int passengerMid= kybd.nextInt();
        totalPassengers+=passengerMid;
        // System.out.println("passengers of age less than 18 and greater than or equal to 5: " + passenger + "\n");
        totalFare+=passengerMid*mid;

        System.out.println(x: "Enter the number of passengers of age less than or equal to 4");
        int passengerLow= kybd.nextInt();
```



```java
        final short mid=3;

        int totalFare=0, totalPassengers=0;

        Scanner kybd = new Scanner(System.in);

        System.out.println(x: "Enter the number of passengers of age 18 or above");
        int passenger= kybd.nextInt();
        totalPassengers+=passenger;
        // System.out.println("passengers of age 18 or above: " + passenger + "\n");
        totalFare+=passenger*adult;

        System.out.println(x: "Enter the number of passengers of age less than 18 and greater than or equal to 5");
        int passengerMid= kybd.nextInt();
        totalPassengers+=passengerMid;
        // System.out.println("passengers of age less than 18 and greater than or equal to 5: " + passenger + "\n");
        totalFare+=passengerMid*mid;

        System.out.println(x: "Enter the number of passengers of age less than or equal to 4");
        int passengerLow= kybd.nextInt();
        totalPassengers+=passengerLow;
        // System.out.println("passengers of age less than or equal to 4: " + passengerLow + "\n");
        System.out.println(x: "\n---------- Category Wise Passenger details ---------\n");
        System.out.println("passengers of age 18 or above: " + passenger + "");
        System.out.println("passengers of age less than 18 and greater than or equal to 5: " + passengerMid + "");
        System.out.println("passengers of age less than or equal to 4: " + passengerLow + "\n");
        System.out.println("Total Passengers: " + totalPassengers + "");
        System.out.println("Total Fare: " + totalFare + "\n");

    }
}
```

JAVA Code Output

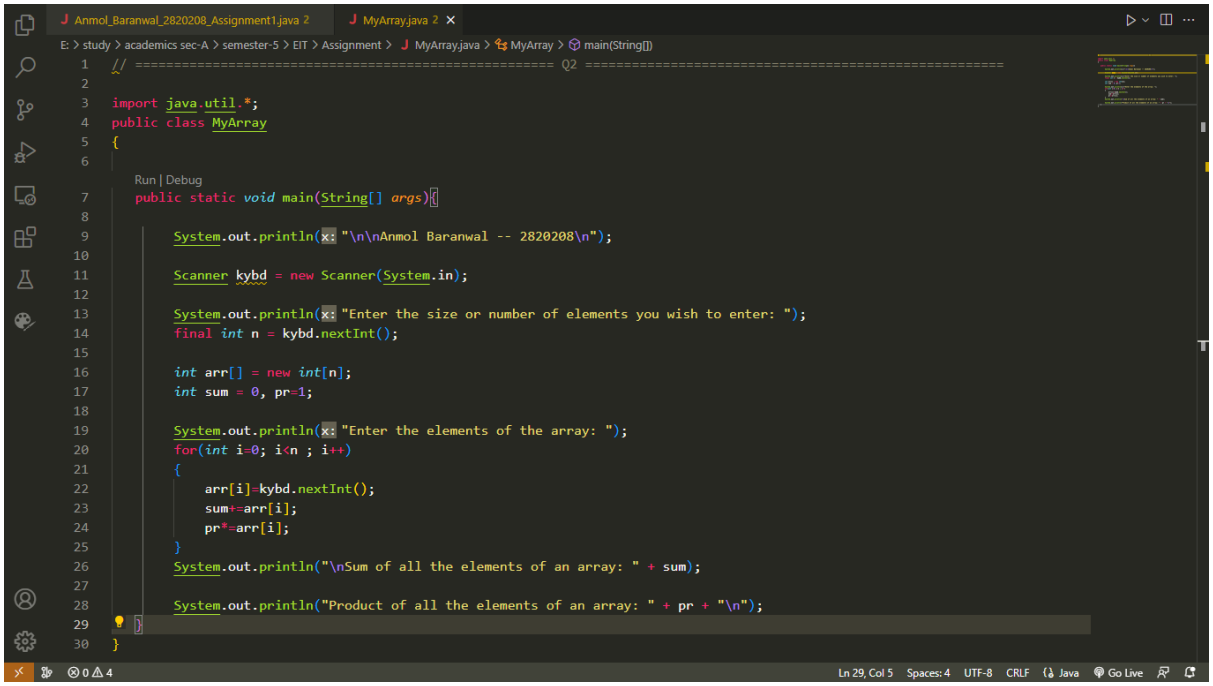


Q2 . Write a program that will read a series of integers from the user and store them in an array called arr[]. The program should then calculate and display the sum, product of all integers entered by the user.

JAVA Code

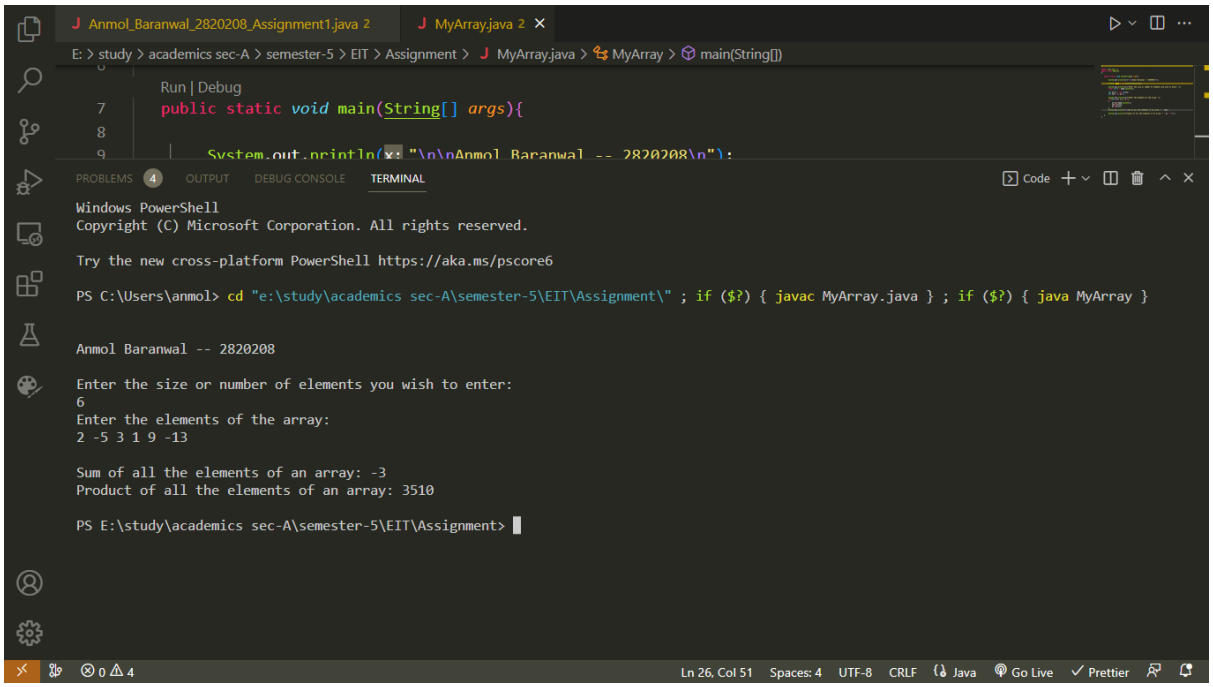
```
import java.util.*;

public class MyArray

{


  public static void main(String[] args){


      System.out.println("\n\nAnmol Baranwal -- 2820208\n");


      Scanner kybd = new Scanner(System.in);


      System.out.println("Enter the size or number of elements you wish to enter: ");

      final int n = kybd.nextInt();


      int arr[] = new int[n];

      int sum = 0, pr=1;


      System.out.println("Enter the elements of the array: ");

      for(int i=0; i<n ; i++)

      {

        arr[i]=kybd.nextInt();

        sum+=arr[i];

        pr*=arr[i];

      }

      System.out.println("\nSum of all the elements of an array: " + sum);

      System.out.println("Product of all the elements of an array: " + pr + "\n");

  }

}
```

JAVA Code Screenshot



```java
// ================================================== Q2 ==================================================

import java.util.*;
public class MyArray
{

    Run | Debug
    public static void main(String[] args){

        System.out.println(x: "\n\nAnmol Baranwal -- 2820208\n");

        Scanner kybd = new Scanner(System.in);

        System.out.println(x: "Enter the size or number of elements you wish to enter: ");
        final int n = kybd.nextInt();

        int arr[] = new int[n];
        int sum = 0, pr=1;

        System.out.println(x: "Enter the elements of the array: ");
        for(int i=0; i<n ; i++)
        {
            arr[i]=kybd.nextInt();
            sum+=arr[i];
            pr*=arr[i];
        }
        System.out.println("\nSum of all the elements of an array: " + sum);

        System.out.println("Product of all the elements of an array: " + pr + "\n");
    }
}
```

JAVA Code Output



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\anmol> cd "e:\study\academics sec-A\semester-5\EIT\Assignment\" ; if ($?) { javac MyArray.java } ; if ($?) { java MyArray }


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Enter the size or number of elements you wish to enter:
6
Enter the elements of the array:
2 -5 3 1 9 -13

Sum of all the elements of an array: -3
Product of all the elements of an array: 3510

PS E:\study\academics sec-A\semester-5\EIT\Assignment>
```

Q3. Write a class with the name employee and basic pay as its data member, find gross pay of an employee for the following allowance and deductions-

Dearness allowance = 25% of Basic pay

House rent allowance = 15% of Basic pay

Provident fund=8.33% of Basic pay

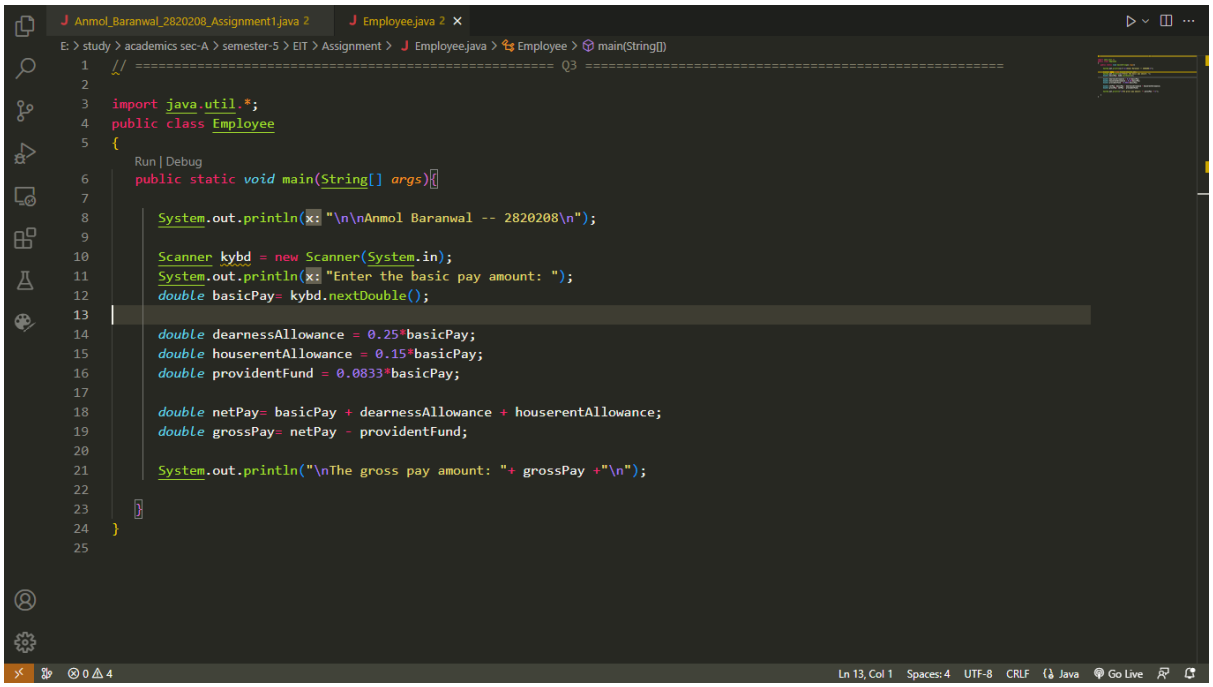
Net pay=basic pay + Dearness Allowance + House Rent Allowance

Gross Pay= Net pay – Provident Fund.

JAVA Code

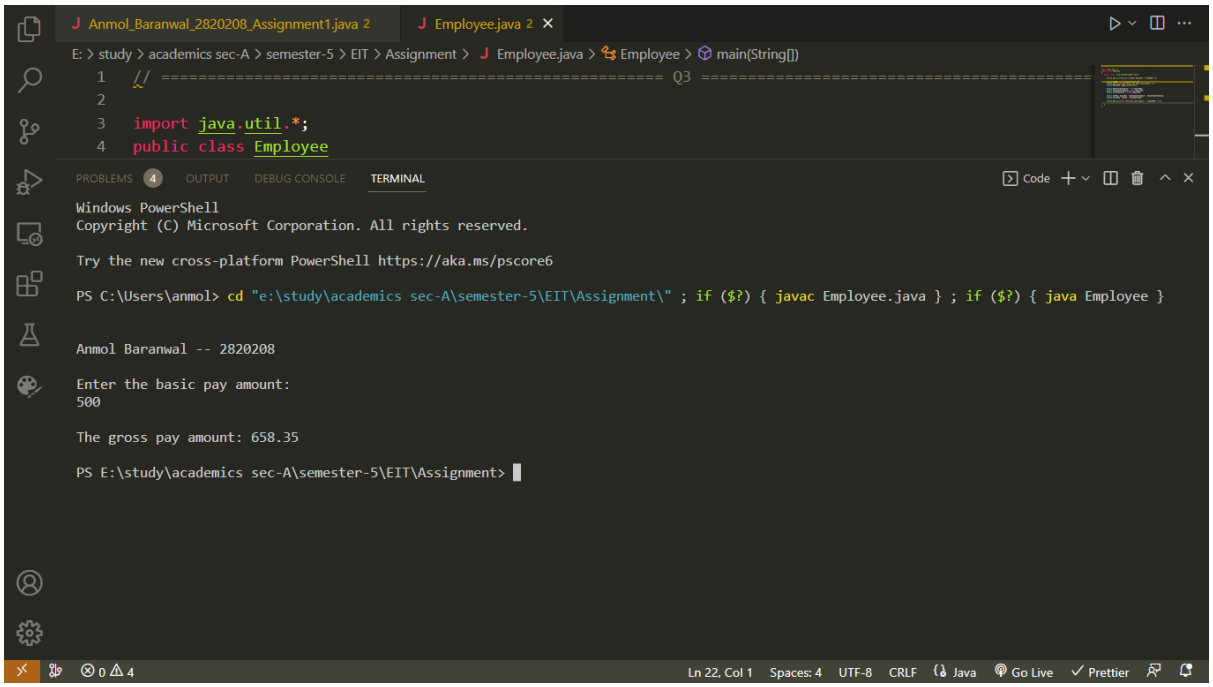
```
import java.util.*;
public class Employee
{
  public static void main(String[] args){

    System.out.println("\n\nAnmol Baranwal -- 2820208\n");

    Scanner kybd = new Scanner(System.in);
    System.out.println("Enter the basic pay amount: ");
    double basicPay= kybd.nextDouble();

    double dearnessAllowance = 0.25*basicPay;
    double houserentAllowance = 0.15*basicPay;
    double providentFund = 0.0833*basicPay;

    double netPay= basicPay + dearnessAllowance + houserentAllowance;
    double grossPay= netPay - providentFund;

    System.out.println("\nThe gross pay amount: "+ grossPay +"\n");
  }
}
```

JAVA Code Screenshot



```java
// ================================================== Q3 ==================================================

import java.util.*;
public class Employee
{
    Run | Debug
    public static void main(String[] args){

        System.out.println(x: "\n\nAnmol Baranwal -- 2820208\n");

        Scanner kybd = new Scanner(System.in);
        System.out.println(x: "Enter the basic pay amount: ");
        double basicPay= kybd.nextDouble();

        double dearnessAllowance = 0.25*basicPay;
        double houserentAllowance = 0.15*basicPay;
        double providentFund = 0.0833*basicPay;

        double netPay= basicPay + dearnessAllowance + houserentAllowance;
        double grossPay= netPay - providentFund;

        System.out.println("\nThe gross pay amount: "+ grossPay +"\n");

    }
}
```

JAVA Code Output



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\anmol> cd "e:\study\academics sec-A\semester-5\EIT\Assignment\" ; if ($?) { javac Employee.java } ; if ($?) { java Employee }


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Enter the basic pay amount:
500

The gross pay amount: 658.35

PS E:\study\academics sec-A\semester-5\EIT\Assignment>
```

Q4 . Your program should prompt the user to enter an account number, a service code r or R for regular service and p or P for premium service. Treat any other character as an error and the number of minutes the service was used during the day and the night (for premium service only). Your program should output the account number, type of services, number of minutes the telephone service was used and the amount due from the user.

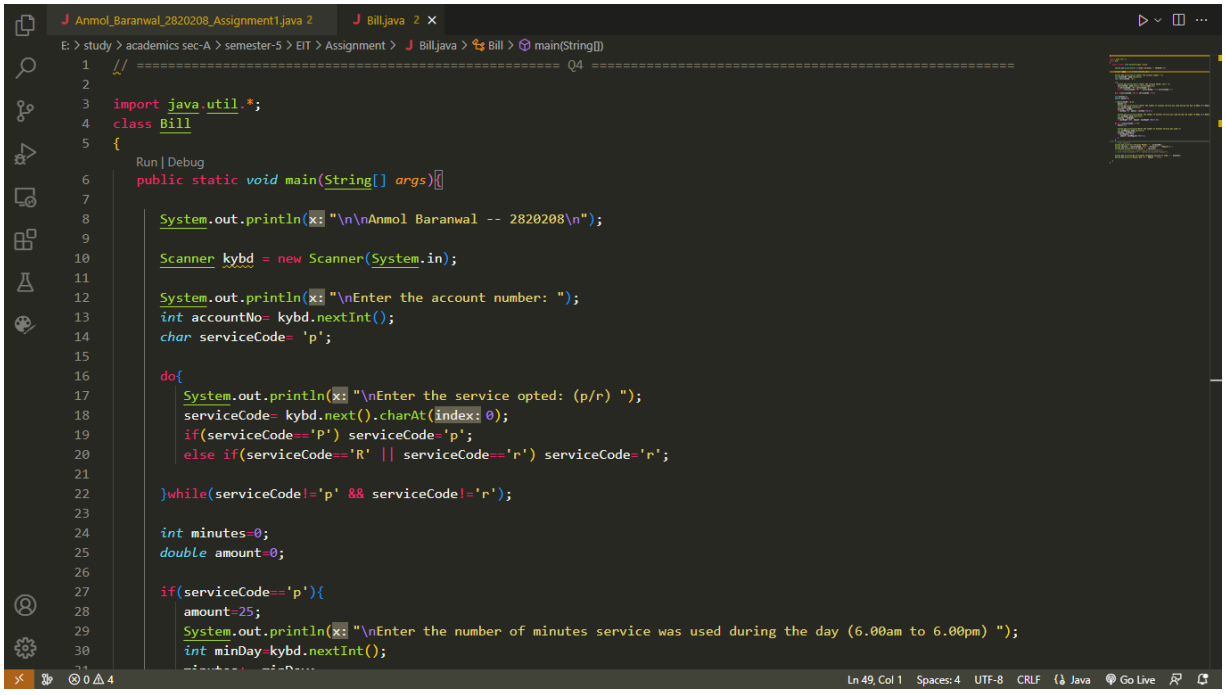
JAVA Code

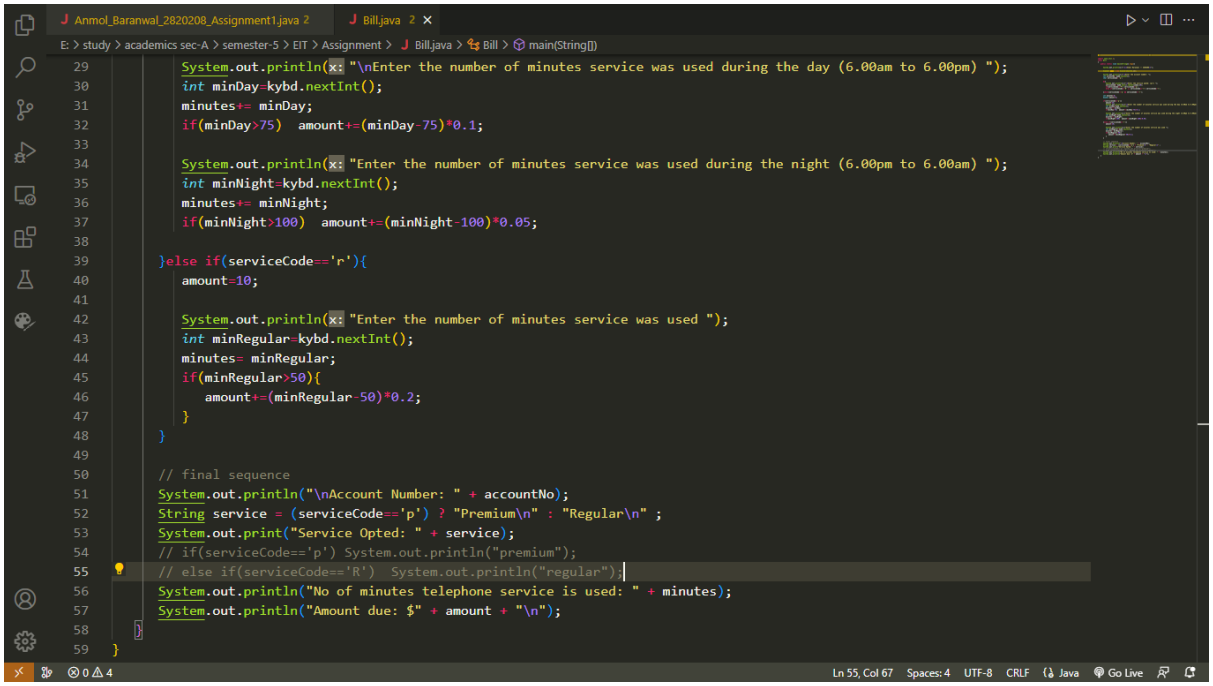
```
import java.util.*;

class Bill

{

  public static void main(String[] args){


    System.out.println("\n\nAnmol Baranwal -- 2820208\n");


    Scanner kybd = new Scanner(System.in);


    System.out.println("\nEnter the account number: ");

    int accountNo= kybd.nextInt();

    char serviceCode= 'p';


    do{

      System.out.println("\nEnter the service opted: (p/r) ");

      serviceCode= kybd.next().charAt(0);

      if(serviceCode=='P') serviceCode='p';

      else if(serviceCode=='R' || serviceCode=='r') serviceCode='r';


    }while(serviceCode!='p' && serviceCode!='r');


    int minutes=0;

    double amount=0;
```

```
    if(serviceCode=='p'){
      amount=25;
      System.out.println("\nEnter the number of minutes service was used during the day
(6.00am to 6.00pm) ");
      int minDay=kybd.nextInt();
      minutes+= minDay;
      if(minDay>75)  amount+=(minDay-75)*0.1;

      System.out.println("Enter the number of minutes service was used during the night
(6.00pm to 6.00am) ");
      int minNight=kybd.nextInt();
      minutes+= minNight;
      if(minNight>100)  amount+=(minNight-100)*0.05;

    }else if(serviceCode=='r'){
      amount=10;

      System.out.println("Enter the number of minutes service was used ");
      int minRegular=kybd.nextInt();
      minutes= minRegular;
      if(minRegular>50){
        amount+=(minRegular-50)*0.2;
      }
    }

    // final sequence
    System.out.println("\nAccount Number: " + accountNo);
    String service = (serviceCode=='p') ? "Premium\n" : "Regular\n" ;
    System.out.print("Service Opted: " + service);
```

```
    // if(serviceCode=='p') System.out.println("premium");
    // else if(serviceCode=='R')  System.out.println("regular");

    System.out.println("No of minutes telephone service is used: " + minutes);
    System.out.println("Amount due: $" + amount + "\n");

  }
}
```

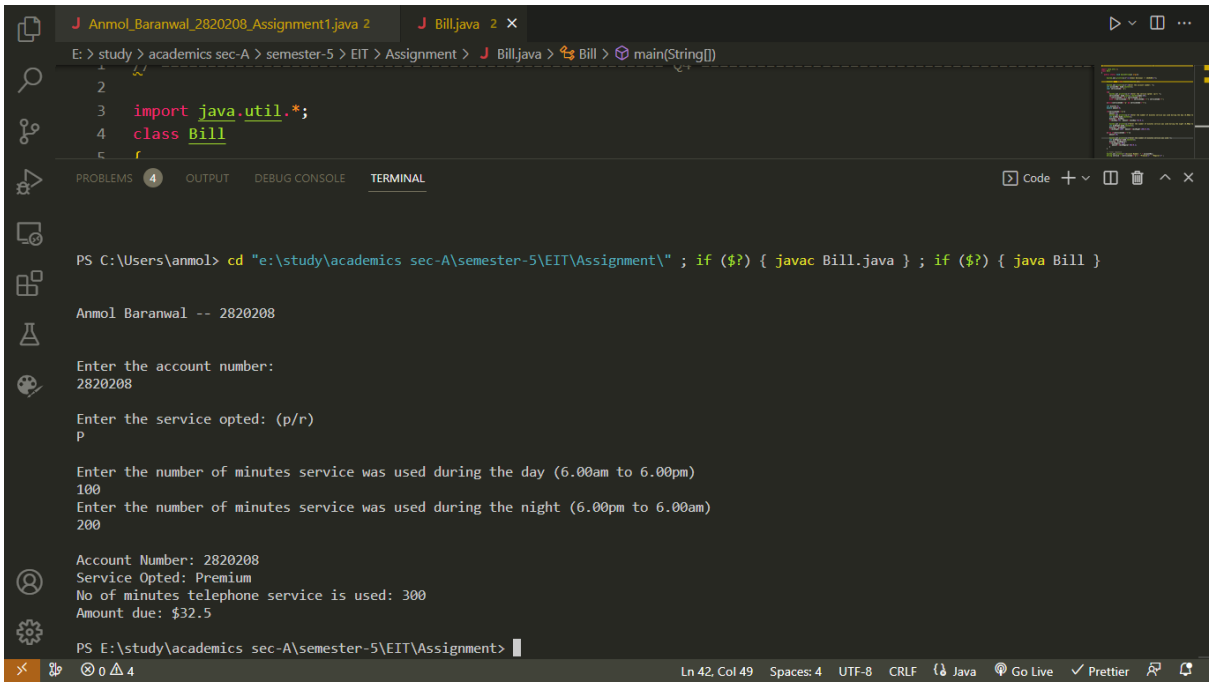
JAVA Code Screenshot





```
        System.out.println("\nEnter the number of minutes service was used during the day (6.00am to 6.00pm) ");
        int minDay=kybd.nextInt();
        minutes+= minDay;
        if(minDay>75)   amount+=(minDay-75)*0.1;

        System.out.println("Enter the number of minutes service was used during the night (6.00pm to 6.00am) ");
        int minNight=kybd.nextInt();
        minutes+= minNight;
        if(minNight>100)   amount+=(minNight-100)*0.05;

    }else if(serviceCode=='r'){
        amount=10;

        System.out.println("Enter the number of minutes service was used ");
        int minRegular=kybd.nextInt();
        minutes= minRegular;
        if(minRegular>50){
           amount+=(minRegular-50)*0.2;
        }
    }

    // final sequence
    System.out.println("\nAccount Number: " + accountNo);
    String service = (serviceCode=='p') ? "Premium\n" : "Regular\n" ;
    System.out.print("Service Opted: " + service);
    // if(serviceCode=='p') System.out.println("premium");
    // else if(serviceCode=='R')  System.out.println("regular");
    System.out.println("No of minutes telephone service is used: " + minutes);
    System.out.println("Amount due: $" + amount + "\n");
    }
}
```

JAVA Code Output



```
PS C:\Users\anmol> cd "e:\study\academics sec-A\semester-5\EIT\Assignment\" ; if ($?) { javac Bill.java } ; if ($?) { java Bill }


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Enter the account number:
2820208

Enter the service opted: (p/r)
P

Enter the number of minutes service was used during the day (6.00am to 6.00pm)
100
Enter the number of minutes service was used during the night (6.00pm to 6.00am)
200

Account Number: 2820208
Service Opted: Premium
No of minutes telephone service is used: 300
Amount due: $32.5

PS E:\study\academics sec-A\semester-5\EIT\Assignment>
```