

TWO FILES AND OUTPUT — TestHotel as the main file, provided by the professor, and the Hotel class in a separate file. The output will be pasted at the end.

TestHotel —

```
import java.util.Date;
import java.text.DateFormat;
import java.text.NumberFormat;
class TestHotel {
public static void main(String[] arg) {
    NumberFormat f = NumberFormat.getCurrencyInstance();
    // Create customer objects, calculate amounts, display receipts

    Hotel customer1 = new Hotel("10 - M", 2, 2);
    customer1.calculate();
    display(customer1, f);

    Hotel customer2 = new Hotel("12 - B");

    Hotel customer3 = new Hotel("12 - C", 2);
    customer3.calculate();
    customer2.addNights(1);
    customer2.calculate();
    display(customer2, f);
    customer3.addGuest(1);
    customer3.calculate();
    display(customer3, f);
    double grossRoom = customer1.getTotalRoom() + customer2.getTotalRoom() +
customer3.getTotalRoom();
    double grossTelephone = customer1.getTelephone() + customer2.getTelephone() +
customer3.getTelephone();
    double grossMeal = customer1.getTotalMeal() + customer2.getTotalMeal() +
customer3.getTotalMeal();
    double grossTips = customer1.getTotalTips() + customer2.getTotalTips() +
customer3.getTotalTips();
    double grossTax = customer1.getTotalTaxes() + customer2.getTotalTaxes() +
customer3.getTotalTaxes();
    display(f, grossRoom, grossTelephone, grossMeal, grossTips, grossTax);

}
static void display(Hotel h, NumberFormat f) {
// Set up and display heading and date for each receipt
System.out.println("\tThe ABC Cheap Lodging, Inc");
    Date d = new Date();
    DateFormat df = DateFormat.getDateInstance();
    System.out.println("\tDate: \t" + df.format(d));
    System.out.println("\tRoom#: \t" + h.getRoom());
    System.out.println("\tRoom Rate: \t" + f.format(h.getRoomRate()));
    System.out.println("\tLength of Stay: \t" + h.getNight() + " night(s)");
    System.out.println("\tNo. of Guests: \t" + h.getGuests());
    System.out.println("\tRoom Cost: \t" + f.format(h.getTotalRoom()));
}
```

```

System.out.println("\tTax 6.5%: \t" + f.format(h.getTotalTaxes()));
System.out.println("\t\t Subtotal: \t" + f.format(h.getSubtotal()));
System.out.println("\tTelephone: \t" + f.format(h.getTelephone()));
System.out.println("\tMeal Charges: \t" + f.format(h.getTotalMeal()));
System.out.println("\tTip: \t" + f.format(h.getTotalTips()));

//Display expenses line by line including subtotal as shown in the output
//Display to total
System.out.println("\nTOTAL AMOUNT DUE\t....." + f.format(h.getTotal()));
//Display thank you message
System.out.println("\nThanks for staying at The ABC Cheap Lodging, Inc" );
System.out.println("\tPlease come again !!!");
System.out.println("\n");
}
static void display(NumberFormat f, double grossRoom, double grossTelephone, double
grossMeal, double grossTips, double grossTax) {
// Complete this method so that it displays the summary amounts as shown in the output
System.out.println("\t\t Official Use Only \t\t\n");
System.out.println("\t\t Today's Summary \t\t");
System.out.println("\tRoom: \t" + f.format(grossRoom));
System.out.println("\tTelephone: \t" + f.format(grossTelephone));
System.out.println("\tMeal: \t" + f.format(grossMeal));
System.out.println("\tTips: \t" + f.format(grossTips));
System.out.println("\tTax: \t" + f.format(grossTax));
System.out.println("-----");
System.out.println("\tGross Transaction: \t" + f.format(grossRoom + grossTelephone +
grossMeal + grossTips + grossTax));
System.out.println("\nProcess Completed.");
}
}

```

Hotel Class file—

```
public class Hotel {
    private String room;
    private int nights = 1;
    private int guests = 1;
    private double telephone = 5.75;
    private double totalAmount;
    private double roomRate = 79.95;
    private double totalRoom = 0;
    private double taxPercentage = 0.065;
    private double totalTaxes = 0;
    private double totalMeal = 0;
    private double totalTips = 0;

    public Hotel(String room, int nights, int guests)
    {
        this.room = room;
        this.guests = guests;
        this.nights = nights;
    }
    public Hotel(String room, int nights)
    {
        this.room = room;
        this.nights = nights;
    }
    public Hotel(String room)
    {
        this.room = room;
    }

    public void calculate()
    {
        double mealCost = 12.95;
        double tipsBase = 0.075;

        totalRoom = this.roomRate * this.guests * this.nights;

        totalTaxes = totalRoom * taxPercentage;

        totalMeal = mealCost * this.guests * this.nights;

        totalTips = (totalRoom + totalMeal + totalTaxes + this.telephone) * tipsBase;

        this.totalAmount = this.telephone + totalTips + totalRoom + totalMeal + totalTaxes;
    }
}
```

```
public void addGuest(int guests)
{
    this.guests = this.guests + guests;
}

public void addNights(int nights)
{
    this.nights = this.nights + nights;
}

public String getRoom()
{
    return room;
}

public double getRoomRate()
{
    return roomRate;
}

public int getNight()
{
    return nights;
}

public int getGuests()
{
    return guests;
}

public double getTotalRoom()
{
    return totalRoom;
}

public double getTotalTaxes()
{
    return totalTaxes;
}

public double getSubtotal()
{
    return totalRoom + totalTaxes;
}

public double getTelephone()
{
    return telephone;
}

public double getTotalMeal()
{
    return totalMeal;
}

public double getTotalTips()
{
    return totalTips;
}
```

```
}  
public double getTotal()  
{  
    return this.totalAmount;  
}  
}
```

OUTPUT —

The ABC Cheap Lodging, Inc
Date: Jun 18, 2023
Room#: 10 - M
Room Rate: \$79.95
Length of Stay: 2 night(s)
No. of Guests: 2
Room Cost: \$319.80
Tax 6.5%: \$20.79
Subtotal: \$340.59
Telephone: \$5.75
Meal Charges: \$51.80
Tip: \$29.86

TOTAL AMOUNT DUE\$428.00

Thanks for staying at The ABC Cheap Lodging, Inc
Please come again !!!

The ABC Cheap Lodging, Inc
Date: Jun 18, 2023
Room#: 12 - B
Room Rate: \$79.95
Length of Stay: 2 night(s)
No. of Guests: 1
Room Cost: \$159.90
Tax 6.5%: \$10.39
Subtotal: \$170.29
Telephone: \$5.75
Meal Charges: \$25.90
Tip: \$15.15

TOTAL AMOUNT DUE\$217.09

Thanks for staying at The ABC Cheap Lodging, Inc
Please come again !!!

The ABC Cheap Lodging, Inc
Date: Jun 18, 2023
Room#: 12 - C
Room Rate: \$79.95
Length of Stay: 2 night(s)
No. of Guests: 2
Room Cost: \$319.80
Tax 6.5%: \$20.79
Subtotal: \$340.59
Telephone: \$5.75
Meal Charges: \$51.80

Tip: \$29.86

TOTAL AMOUNT DUE\$428.00

Thanks for staying at The ABC Cheap Lodging, Inc
Please come again !!!

Official Use Only

Today's Summary

Room: \$799.50

Telephone: \$17.25

Meal: \$129.50

Tips: \$74.87

Tax: \$51.97

Gross Transaction: \$1,073.08

Process Completed.