package labFourPackage;

import java.util.Scanner;

public class TuitionClass

{

public static void main (String[] args)

{

Scanner keyboard = new Scanner (System.in);

String name,emptyString;

int fee=0,hours,count=0;

String code;

int i,pinNumber,feeOne=0,feeTwo=0,feeThree=0, feeFour=0,count1=0,count2=0,count3=0,count4=0;

for ( i = 1; i <=10; i++)

{

System.out.println( "Enter your last name ");

name = keyboard.nextLine();

System.out.println( "Enter your four digit pin number");

pinNumber = keyboard.nextInt();

emptyString = keyboard.nextLine();

System.out.println("Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident");

code = keyboard.nextLine ();

System.out.println("Enter hours");

hours = keyboard.nextInt();

emptyString = keyboard.nextLine();

if ( code.equals("UnderGradCommuter"))

{

fee = 500 \* (hours);

feeOne = feeOne + fee;

count1 = count1 + 1;

}

else if ( code.equals("UnderGradResident"))

{

fee = 550 \* (hours);

feeTwo = feeTwo + fee;

count2 = count2 + 1;

}

else if ( code.equals("GradCommuter"))

{

fee = 650 \* (hours);

feeThree = feeThree + fee;

count3 = count3 + 1;

}

else if ( code.equals("GradResident"))

{

fee = 700 \* (hours);

feeFour = feeFour + fee;

count4 = count4 + 1;

}

else

fee = 0;

System.out.println( "The fee for student " + name + " is " + fee);

}

System.out.println( "The total fee for code UnderGraduate Commuting is " + feeOne + ", and total number of students is " + count1);

System.out.println( "The total fee and count code UnderGraduate Resident is " + feeTwo + ", and total number of students is " + count2);

System.out.println( "The total fee and count code Graduate Commuting is " + feeThree + ", and total number of students is " + count3);

System.out.println( "The total fee and count code Graduate Resident is " + feeFour + ", and total number of students is "+ count4);

}

}

##First output after step number#9

Enter your last name

Ruiz

Enter your four digit pin number

1234

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradResident

Enter hours

7

The fee for student Ruiz is 3850

Enter your last name

Cohen

Enter your four digit pin number

2341

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

GradCommuter

Enter hours

15

The fee for student Cohen is 9750

Enter your last name

Bird

Enter your four digit pin number

3412

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradResident

Enter hours

15

The fee for student Bird is 8250

The total fee for code UnderGraduate Commuting is 0

The total fee for code UnderGraduate Resident is 12100

The total fee for code Graduate Commuting is 9750

The total fee for code Graduate Resident is 0

##Final output after step number#11

Enter your last name

Ruiz

Enter your four digit pin number

1234

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradResident

Enter hours

7

The fee for student Ruiz is 3850

Enter your last name

Cohen

Enter your four digit pin number

2341

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

GradCommuter

Enter hours

15

The fee for student Cohen is 9750

Enter your last name

Bird

Enter your four digit pin number

3412

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradResident

Enter hours

15

The fee for student Bird is 8250

Enter your last name

Lobo

Enter your four digit pin number

3456

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

GradCommuter

Enter hours

7

The fee for student Lobo is 4550

Enter your last name

Barkely

Enter your four digit pin number

4563

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

GradResident

Enter hours

10

The fee for student Barkely is 7000

Enter your last name

O'Neill

Enter your four digit pin number

5643

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradCommuter

Enter hours

18

The fee for student O'Neill is 9000

Enter your last name

Caputo

Enter your four digit pin number

6435

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradResident

Enter hours

14

The fee for student Caputo is 7700

Enter your last name

Courtney

Enter your four digit pin number

5678

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

GradCommuter

Enter hours

12

The fee for student Courtney is 7800

Enter your last name

Ruben

Enter your four digit pin number

6789

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

GradResident

Enter hours

12

The fee for student Ruben is 8400

Enter your last name

Stuart

Enter your four digit pin number

5687

Enter code - UnderGradCommuter - UnderGradResident - GradCommuter - GradResident

UnderGradCommuter

Enter hours

3

The fee for student Stuart is 1500

The total fee for code UnderGraduate Commuting is 10500, and total number of students is 2

The total fee and count code UnderGraduate Resident is 19800, and total number of students is 3

The total fee and count code Graduate Commuting is 22100, and total number of students is 3

The total fee and count code Graduate Resident is 15400, and total number of students is 2

1. How does a nested conditional statement work?

Ans- The outermost condition is checked first and then the program enters into the scope of the condition if it is true. Otherwise the control moves to the first else statement,looks for any nested if condition.If that condition is true the control statement moves into that “if” scope. So, all the nested if conditions are checked which are in the following else conditions. If none of the conditions are true then the control executes the falls through else.

2. Is aligning of the braces important for the compiler or the reader?

Ans- Java defines scope by opening and ending braces, so all opening braces must have their ending braces. But in java, indentation is for viewing purposes but makes no difference to the compiler.

3 Why is the statement needed else fee = 0; in Lab 4?

Test the program without it. You may just place a comment before the line and run it

again. What happens? e.g. // else fee = 0;

Ans- “else fee = 0” is a falls through else which will be executed when none of the above conditions were true. In this case the variable fee will never be initialized and so the compiler detects an error saying “variable fee might not had been initialized”.

4. What is an accumulating statement?

Ans- An accumulating statement is one which does two operations, update, and assignment of the same variable.

example - count = count + 1. Here count is added to 1 and then assigned to itself.

5. Why must an accumulator be initialized to zero? When in the program is the accumulator initialized to zero?

Ans- In the accumulating statement the accumulator is used to calculated the new value for accumulator, so if the value is not initialized, its value will not be determined in the accumulation operation.

The value of the accumulator has to be initialized before the accumulation statement.

6. How does a for loop work?

Ans- for(int i=0; i< 10; i++){//do something}

The for loop consists of three parts, initialization of the counter, conditional statement to check the counter’s value, and the part to change the counter.

First the counter is initialized, then it is checked in the conditional statement, then statements in the scope of for loop are executed, then the counter is incremented, now again the counter is checked in conditional statement. After this the loop continues in the same fashion till the conditional statement invalidates.

7. What is the difference between a loop and a conditional statement?

Ans - A loop statement repeats an action again and again until some stopping condition is met.But in conditional statement, a condition is checked once and its result decide on either if or else block will be executed.

8. How are strings compared in Java?

Ans - “equals” method of String class is used to compare values of two strings.

Example - String s1, s2; s1.equals(s2);

9. How are primitives compared in Java?

Ans - Primitives are compared by using “==“ operator in java.

Example: int i1, i2; i1==i2;

10. What happens if you don’t place a prompt statement before a keyboard.next Double( ) statement? Will the program compile? Will the program run?

Ans - The user will not know what he/she is supposed to do.

The program will compile, and run as well. But the user of the program should know when to enter what type of value as he/she would not be prompted.