short7

December 7, 2021

1 Short Assessed Exercise 7

2 Level –1–

2.1 –ronika devi –

2.2 –1st dec 21–

2.3 Version –1–

2.4 Summary of the Question

–this code is used for players of paralympic relay competitions which includes players of different disability class making up a team, you have to create a code where there are specific leg assigned to each teams. the user inputs the country and the disability class for each player the code outputs the final output telling the user which one is legal and which one's not based on the user input. there is a record named universalrelayteams created with four different fields.Accessor methods are used in this code and getter and setter methods are also created. –

2.4.1 – universalrelayteams –

What it does – this method creates a record named universalrelayteams. –

Implementation (how it works) – the record with four different fields of different types are created. –

[2]:
```
//a record
class universalrelayteams
{
    String name; //variable name of type string
    int Leg1;// variable leg1,leg2,leg3,leg4 of type integers.
    int Leg2;
    int Leg3;
    int Leg4;
}
```

Testing

[ ]:
```

```

2.4.2 – accessormethods –

What it does – method 2 has different different methods which create a new record and get and set values of the fields inside the record –

Implementation (how it works) –a new type of record is created of type universalrelayeteams named newteam for which all fields have been assigned values.countryname, leg1,;eg2,leg3,leg4 have been set and get the values. –

[2]:
```
//there are dofferent methods of create get and set the values
// Create a team and set all four fields inside a record.
//
public static universalrelayteams createteam(String name, int l1, int l2, int␣
↪l3, int l4)
{
  universalrelayteams newteam = new universalrelayteams();

    newteam.Name = xyz;
    newteam.leg1 = 0;
    newteam.leg2 = 0;
    newteam.leg3 = 0;
    newteam.leg4 = 0;

    return newteam;
}
// Given a universalrelayteams record and a new name, store the name in the␣
↪record
// Return the updated record value
public static universalrelayteams setTeamCountryName(universalrelayteams␣
↪Country, String xyz)
{
    Country.name = xyz;

    return Country; //return the value of the countryname
}
//method created to get the country name
public static String getTeamCountryName(universalrelayteams Country)
{
    return  Country.name; //return the value of countryname
}
// Given a universalrelayteams record and a new value for leg1, store the int␣
↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
↪Country, int l1)
{
    Country.Leg1 = l1;
```

```
    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg1;
}
// Given a universalrelayteams record and a new value for leg2, store the int␣
 ↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l2)
{
    Country.Leg2 = l2;

    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg2;
}
// Given a universalrelayteams record and a new value for leg3, store the int␣
 ↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l3)
{
    Country.Leg3 = l3;

    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg3;
}
// Given a universalrelayteams record and a new value for leg4, store the int␣
 ↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l4)
{
    Country.Leg4= l4;
```

```
    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg4;
}
```

Testing

[ ]:
```
// TEST CODE for method 2
```

2.4.3 – classname –

What it does – method classname creates a new variable of type universalrealytimes and then uses getter and setter to assign values. –

Implementation (how it works) – a for loop is used to make sure the code runs four times, scanner variable is used for user input after the for loop if stattemnets are used tio compare the user inputs with the values inside the if statements as the values for leg1.leg2,leg3,leg4 were fixed. if the user inputs doesn't match the values then the screen outputs that this particular leg is not legal at the end of the code, –

[5]:
```
// Method 3 code
public static void classname()
{
    universalrelayteams nameofplace = new universalrelayteams(); //a new record␣
↪created of type niversalrelayteams
    universalrelayteams nameofclass = new universalrelayteams(); //a new record␣
↪created of type niversalrelayteams
    String Nameofcountry = inputString("What country is the team representing?
↪"); //input from the user

    nameofplace = setTeamCountryName(nameofplace, Nameofcountry); // set method␣
↪to assign the value
    System.out.println(getTeamCountryName(nameofplace)); //get method to print␣
↪or get the value
    int classs = 0; //varioable classs of type int

    int [] teams = new int[4]; //array created of type int
    for (int i=0; i<4; i++) //for loop used to make sure the code insde the␣
↪loop runs four times.
    {
        Scanner scanner = new Scanner(System.in); //variable for user input.
        System.out.println("What is the disability class for leg " + (i+1) + " ?
↪");
```

```
        teams[i] = Integer.parseInt(scanner.nextLine()); //values of user␣
↪iniput stored in the array
        nameofclass =  setdisabilityclass(nameofclass, teams[i]);  //set method␣
↪used to assign the value
        System.out.println("T" + getsetdisabilityclass(nameofclass)); //get␣
↪method used to get the value
    }
    System.out.println("The " + Nameofcountry + " team is: Leg 1, T" + teams[0]␣
↪+ "; Leg 2, T" + teams[1] + "; Leg 3, T" + teams[2] + "; Leg 4, T" +␣
↪teams[3]);

    //if statements used to compare the values of leg1,leg2,leg3 and leg4
    if ((teams[0] == 11 ) | (teams[0] == 13)) //it checks if the user inputs␣
↪this value for leg1
        //if the user inputs this value then nothinig is printed the input is␣
↪correct
    {
    }

    else
    {
        System.out.println("Leg 1 (T"+ teams[0] + ") is not legal."); //if the␣
↪user input is wrong then the user sees this output on the csreen
    }
    //same for leg2 it compares the user inputs
    if ((teams[1] == 16 ) | (teams[1] == 62))
    {
    }//if correct nothing is printed

    else //else statment is printed if user input is wrong.
    {
        System.out.println("Leg 2 (T"+ teams[1] + ") is not legal.");
    }
    //for leg3 also the if statements are used to compare
    if ((teams[2] == 35 ) | (teams[2] == 36))
    {
    }//if correct input nothing is printed

    else
    {
        //if not correct then this is printed
        System.out.println("Leg 3 (T"+ teams[2] + ") is not legal.");
    }
    //for leg4 also the vallue is compared if correct nothing is printed
    if ((teams[3] == 51 ) | (teams[3] == 52))
    {
```

```
    }
    //if not correct else statement is printed.
    else
    {
        System.out.println("Leg 4 (T"+ teams[3] + ") is not legal.");
    }
    return;
}
//call to this method is in the test box
```

Testing

[7]:
```
// TEST CODE for method 3
classname();
```

```
What country is the team representing?

 r

r
What is the disability class for leg 1 ?

 4

T4
What is the disability class for leg 2 ?

 3

T3
What is the disability class for leg 3 ?

 2

T2
What is the disability class for leg 4 ?

 5

T5
The r team is: Leg 1, T4; Leg 2, T3; Leg 3, T2; Leg 4, T5
Leg 1 (T4) is not legal.
Leg 2 (T3) is not legal.
Leg 3 (T2) is not legal.
Leg 4 (T5) is not legal.
```

– Add more code and description boxes as needed

2.4.4 Running the program

Run the following call to simulate running the complete program.

[ ]:
```
// add a method call here
// It should call the method that does the work.
// this method will be called by main in the full program below
```

2.5 The complete program

This version will only compile here. To run it copy it into a file called initials.java on your local computer and compile and run it there.

[10]:
```
// ronika devi
// 7thdec
// 1
//this code runs for the teams of paralympic. it uses accessor methods to␣
 ↪access the methods and uses if statements to compare the user inputs.


import java.util.Scanner;

class codeforplayers
{
    public static void main (String [] a)
    {
        classname();
        System.exit(0);
    }
}
//input string method for user input
public static String inputString (String message)
{
       String answer;
       Scanner scanner = new Scanner(System.in);

       System.out.println(message);
       answer = scanner.nextLine();

       return answer;
}
//record created with four different fields
class universalrelayteams
{
    String name;
    int Leg1;
    int Leg2;
    int Leg3;
    int Leg4;
}
//there are different methods of create get and set the values
```

```
// Create a team and set all four fields inside a record.
//
public static universalrelayteams createteam(String name, int l1, int l2, int␣
 ↪l3, int l4)
{
  universalrelayteams newteam = new universalrelayteams();

    newteam.Name = xyz;
    newteam.leg1 = 0;
    newteam.leg2 = 0;
    newteam.leg3 = 0;
    newteam.leg4 = 0;

    return newteam;
}
// Given a universalrelayteams record and a new name, store the name in the␣
 ↪record
// Return the updated record value
public static universalrelayteams setTeamCountryName(universalrelayteams␣
 ↪Country, String xyz)
{
    Country.name = xyz;

    return Country; //return the value of the countryname
}
//method created to get the country name
public static String getTeamCountryName(universalrelayteams Country)
{
    return  Country.name; //return the value of countryname
}
// Given a universalrelayteams record and a new value for leg1, store the int␣
 ↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l1)
{
    Country.Leg1 = l1;

    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg1;
}
// Given a universalrelayteams record and a new value for leg2, store the int␣
 ↪value in the record
```

```
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l2)
{
    Country.Leg2 = l2;

    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg2;
}
// Given a universalrelayteams record and a new value for leg3, store the int␣
 ↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l3)
{
    Country.Leg3 = l3;

    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg3;
}
// Given a universalrelayteams record and a new value for leg4, store the int␣
 ↪value in the record
// Return the updated record value
public static universalrelayteams setdisabilityclass(universalrelayteams␣
 ↪Country, int l4)
{
    Country.Leg4= l4;

    return Country;
}

public static int getsetdisabilityclass(universalrelayteams Country)
{
    return  Country.Leg4;
}



public static void classname()
```

```
{
    universalrelayteams nameofplace = new universalrelayteams(); //a new record␣
↪created of type niversalrelayteams
    universalrelayteams nameofclass = new universalrelayteams(); //a new record␣
↪created of type niversalrelayteams
    String Nameofcountry = inputString("What country is the team representing?
↪"); //input from the user

    nameofplace = setTeamCountryName(nameofplace, Nameofcountry); // set method␣
↪to assign the value
    System.out.println(getTeamCountryName(nameofplace)); //get method to print␣
↪or get the value
    int classs = 0; //varioable classs of type int

    int [] teams = new int[4]; //array created of type int
    for (int i=0; i<4; i++) //for loop used to make sure the code insde the␣
↪loop runs four times.
    {
        Scanner scanner = new Scanner(System.in); //variable for user input.
        System.out.println("What is the disability class for leg " + (i+1) + " ?
↪");
        teams[i] = Integer.parseInt(scanner.nextLine()); //values of user␣
↪iniput stored in the array
        nameofclass =  setdisabilityclass(nameofclass, teams[i]);  //set method␣
↪used to assign the value
        System.out.println("T" + getsetdisabilityclass(nameofclass)); //get␣
↪method used to get the value
    }
    System.out.println("The " + Nameofcountry + " team is: Leg 1, T" + teams[0]␣
↪+ "; Leg 2, T" + teams[1] + "; Leg 3, T" + teams[2] + "; Leg 4, T" +␣
↪teams[3]);

    //if statements used to compare the values of leg1,leg2,leg3 and leg4
    if ((teams[0] == 11 ) | (teams[0] == 13)) //it checks if the user inputs␣
↪this value for leg1
        //if the user inputs this value then nothinig is printed the input is␣
↪correct
    {
    }

    else
    {
        System.out.println("Leg 1 (T"+ teams[0] + ") is not legal."); //if the␣
↪user input is wrong then the user sees this output on the csreen
    }
    //same for leg2 it compares the user inputs
```

```
    if ((teams[1] == 61 ) | (teams[1] == 62))
    {
    }//if correct nothing is printed

    else //else statment is printed if user input is wrong.
    {
        System.out.println("Leg 2 (T"+ teams[1] + ") is not legal.");
    }
    //for leg3 also the if statements are used to compare
    if ((teams[2] == 35 ) | (teams[2] == 36))
    {
    }//if correct input nothing is printed

    else
    {
        //if not correct then this is printed
        System.out.println("Leg 3 (T"+ teams[2] + ") is not legal.");
    }
    //for leg4 also the vallue is compared if correct nothing is printed
    if ((teams[3] == 51 ) | (teams[3] == 52))
    {
    }
    //if not correct else statement is printed.
    else
    {
        System.out.println("Leg 4 (T"+ teams[3] + ") is not legal.");
    }
    return;
}

classname();
```

```
What country is the team representing?

 GB

GB
What is the disability class for leg 1 ?

 11

T11
What is the disability class for leg 2 ?

 61

T61
What is the disability class for leg 3 ?

 52
```

```
T52
What is the disability class for leg 4 ?

 12

T12
The GB team is: Leg 1, T11; Leg 2, T61; Leg 3, T52; Leg 4, T12
Leg 3 (T52) is not legal.
Leg 4 (T12) is not legal.
```

END OF LITERATE DOCUMENT