

.ipynb

November 23, 2021

1 Short Assessed Exercise 5

2 Level –1–

2.1 –Ronika devi –

2.2 –16/11/21–

2.3 Version –1–

2.4 Summary of the Question

–Write a program that has information about 5 Olympians. the name, medals won and the sport they competed in should each be in separate arrays. the user is asked to write a name of olympic/Paralympic. the user is asked to write how many medals each of them won and in which sport did they compete in. after the results the program calculates an average medals won by each olympic/paralympic. at the end the result for average should be printed out and information about each olympic should be printed. –

2.4.1 – PlayerNames –

What it does – this method stores details about the player names in an array a for loop is used.–

Implementation (how it works) – this method prints out the question for the user to input the Olympic name in a for loop and it asks the user 5 times each time user has to input a user a player name and it is stored in the array Olympicplayers. an array of type string is created named Olympicplayers and the array size is 5 the starting position is from index 0.the method inputstring is used to allow the user to input a value.–

```
[2]: //the method is used to allow the user to input something.
public static String inputString (String message)
{
    //variable answer with type string to allow user to enter string values
    String answer;
    Scanner scanner = new Scanner(System.in);

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

```

        return answer;
        //return this value so that it can be used in other methods
    }

    //this method is used for user to enter the player names in a for loop
    public static void Playernames()
    {
        String []   Olympicplayers = new String[5]; //array initialised
        for(int i = 0; i<5; i++)                    //for loop used to ask the user
        ↪ about the player name 5 times
        {

            Olympicplayers [i] = inputString("Name Olympians/Paralympian " + (i+1)
        ↪ + "?"); //user input the question that is printed on screen.

        }
        return;
    }
    //the call to method is in the testing box

```

Testing

```

[3]: // TEST CODE for method 1
    // Follow each method with code to test it
    Playernames();

```

Name Olympians/Paralympian 1?

alex

Name Olympians/Paralympian 2?

xyz

Name Olympians/Paralympian 3?

z

Name Olympians/Paralympian 4?

kadeena

Name Olympians/Paralympian 5?

dh

2.4.2 – Medalswon –

What it does – this method includes a array for medals won by each player –

Implementation (how it works) – two arrays for medals won and Olympic players are created with array size of 5. medalswon has the array type of integer so that it takes integer values only.if

statements are used to compare the user inputs with the string values. for loop is used which has a variable i that is initialised as 0 and it runs 4 times. all the arrays have the size of i that means it will run with the size that variable i has. the user is asked about the Olympic name and then how many medals that particular Olympic won. –

```
[4]: //method medalswon is used for the array of medals that each player won.

public static void Medalswon()
{
    String [] Olympicplayers = new String[5];
    int [] medalswon = new int[5];          //new array created for medals won by
    ↪ each player.

    Scanner scanner = new Scanner(System.in);
    for(int i = 0; i<5; i++) //for loop used
        // i is initialised with value =1 and this loop runs till i is less
    ↪ than 5
        //runs till 4
        //for both the arrays i runs 5 times
    {
        Olympicplayers [i] = inputString("Name Olympians/Paralympian " + (i+1)
    ↪ + "?"); //output statement for user to ans
        System.out.println("How many medals did he/she win?");
        medalswon [i] = Integer.parseInt(scanner.nextLine());
    }
}

Medalswon();
//method call is in the test box
```

Name Olympians/Paralympian 1?

hi

How many medals did he/she win?

6

Name Olympians/Paralympian 2?

name

How many medals did he/she win?

6

Name Olympians/Paralympian 3?

zu

How many medals did he/she win?

5

Name Olympians/Paralympian 4?

x

How many medals did he/she win?

7

Name Olympians/Paralympian 5?

m

How many medals did he/she win?

8

Testing

```
[10]: // TEST CODE for method 2  
Medalswon();
```

Name Olympians/Paralympian 1?

Adam Peaty

How many medals did he/she win?

6

Name Olympians/Paralympian 2?

Sarah Storey

How many medals did he/she win?

3

Name Olympians/Paralympian 3?

hi

enter a correct name please

Name Olympians/Paralympian 4?

Mo Farah

How many medals did he/she win?

8

Name Olympians/Paralympian 5?

Laura Kenny

How many medals did he/she win?

7

2.4.3 – sportscompeted –

What it does – this method creates a new array for of size 5 for the sports that each player competed in. –

Implementation (how it works) – for loop is used. array for sports competed is created of type string and size 5. the user is asked about name of each Olympic, the number of medals won by player and followed with the screen output of which sport did the player compete in.

```
[5]: //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;
}
//method for array of sports competed by players
public static void sportscompeted()
{
    String [] Olympicplayers = new String[5]; //array for olympic players
    ↪names of size 5 with the type string
    int [] medalswon = new int[5];           //array for medals won by each
    ↪player of size 5 with the type integer
    String [] sportcompetedin = new String[5]; //new array created with type
    ↪string and size 5 with the type string

    Scanner scanner = new Scanner(System.in);
    for(int i = 0; i<5; i++)
        //for loop used which runs 6 times.
    {
        Olympicplayers [i] = inputString("Name Olympians/Paralympian " + (i+1)+
        ↪"?"); //user inputs the Olympic name
        System.out.println("How many medals did he/she win?"); //user enters
        ↪the number of medals won by that particular player
        medalswon [i] = Integer.parseInt(scanner.nextLine());
        sportcompetedin [i] = inputString("What sport did he/she compete in?");
        ↪//program asks the user about the sports that players competed in

    }

    return;
}
```

```
}
```

```
//call for this method is in the test box.
```

Testing

```
[6]: // TEST CODE for method 3  
sportscompeted();
```

Name Olympians/Paralympian 1?

xyz

How many medals did he/she win?

6

What sport did he/she compete in?

running

Name Olympians/Paralympian 2?

sh

How many medals did he/she win?

5

What sport did he/she compete in?

cycling

Name Olympians/Paralympian 3?

Mo Farah

How many medals did he/she win?

4

What sport did he/she compete in?

swimming

Name Olympians/Paralympian 4?

kadeena

How many medals did he/she win?

4

What sport did he/she compete in?

cycling

Name Olympians/Paralympian 5?

laura

How many medals did he/she win?

4

What sport did he/she compete in?

swimming

2.4.4 Running the program

Run the following call to simulate running the complete program.

```
[4]: // 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

Playernames();
Medalswon();
sportscompeted();
```

```
| Playernames();
cannot find symbol
symbol:   method Playernames()
```

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.

```
[2]: // Delete these comments and add the full program in a single code box here

// This section is needed for all but the first short assessed exercise

// Cut and paste this version as a Java file and compile and run it locally to
↳check it works.

// The full program should include
//      - libraries (where needed),
//      - main method and
//      - class definition
//      - Each method should have a comment explaining its purpose
//      - The program should start with comments as below

// Ronika Devi
// 23 nov 21
// 1
// this is a program that stores information about different Olympic players
↳and asks users to input the name, medals won and the
```

```

//the sport they competed in (the players). this is a program which has
↳seperate arrays made for each detail.

import java.util.Scanner; // Needed to make Scanner available

class Olympicplayers
{
    public static void main (String [] a)
    {
        playerdetails(); //this is the method that is doing the work
        System.exit(0);
    }
}
//this method is used to allow the user to make input in the program
public static String inputString (String message)
{
    String answer;
    Scanner scanner = new Scanner(System.in);

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

    return answer;
}
//this is the main method.
public static void playerdetails()
{
    //declarartions of variavles used in the code
    double averagemedals=0.0;
    int medalseachget;
    final int myarraysize = 5;
    int totalmedals = 0;

    //these are the 3 main arrays which have the same size

    String [] Olympicplayers = new String[myarraysize]; //array for olympic
↳players names of size 5 with the type string
    int [] medalswon = new int[myarraysize]; //array for medals won
↳by each player of size 5 with the type intger
    String [] sportcompetedin = new String[myarraysize]; //new array created
↳with type string and size 5 with the type string

    Scanner scanner = new Scanner(System.in);
    for(int i = 0; i<5; i++)
        //for loop used which runs 6 times.
    {

```



```

        Olympicplayers [i] = inputString("Name Olympians/Paralympian " + (i+1)+
↪"?"); //user inputs the Olympic name
        System.out.println("How many medals did he/she win?");//user enters the
↪number of medals won by that particular player
        medalswon [i] = Integer.parseInt(scanner.nextLine());
        totalmedals = totalmedals + medalswon[i];
        sportcompetedin [i] = inputString("What sport did he/she compete in?");
↪//program asks the user about the sports that players competed in

    }
    averagemedals = totalmedals/5.00; //this is to calculate the average of 5
↪players medals
    medalseachget = (int)Math.round(averagemedals); //the average is rounded up
↪and value is assigned to medalseachget
    System.out.println("Between them they won an average of " + medalseachget +
↪" medals each" ); //statement is printed
    players(sportcompetedin,Olympicplayers,medalswon,myarraysize);
}

    //myarraysize is a final variable
public static void players(String sportcompetedin[], String
↪Olympicplayers[],int medalswon[],int myarraysize)
{

    for(int l = myarraysize-1; l>=0; l--)//another for loop is used to print
↪array
    {
        System.out.println(sportcompetedin[l] + " , " + Olympicplayers[l] + "
↪, " + medalswon[l]);
    }
    return;
}

playerdetails(); //call to the main method

```

Name Olympians/Paralympian 1?

hi

How many medals did he/she win?

6

What sport did he/she compete in?

hi

Name Olympians/Paralympian 2?

kadeena

How many medals did he/she win?

5

What sport did he/she compete in?

swimming

Name Olympians/Paralympian 3?

laura

How many medals did he/she win?

5

What sport did he/she compete in?

running

Name Olympians/Paralympian 4?

ronika

How many medals did he/she win?

7

What sport did he/she compete in?

cycling

Name Olympians/Paralympian 5?

xyz

How many medals did he/she win?

9

What sport did he/she compete in?

swimming/cycling

Between them they won an average of 6 medals each

swimming/cycling , xyz , 9

cycling , ronika , 7

running , laura , 5

swimming , kadeena , 5

hi , hi , 6

END OF LITERATE DOCUMENT

[]: