mini project level 8

December 17, 2021

1 Short Assessed Exercise

2 Level -8

2.1 Fazeel asim

2.2 7th december 2021

2.3 Version -1

2.4 Summary of the Question

Write a chat bot

2.5 The literate program development

2.5.1 Starting the conversation and asking users name/input/output file

What it does The chat bot tells its name and asks the users name and how the user is going and prints a greeting It creates two text files one for input and one for output

Implementation (how it works) Creates strings and uses scanner statements to print out user output using user input creates a file with first line of the file holding a number giving the total number of input/output that will be put in the file.

[15]:
```
import java.io.*;
    public static void inputfile() throws IOException
    {
        System.out.println("Hey! My name is bobby.I'm a chat bot.");
        String name;
        String howareyou;
        Scanner scanner = new Scanner(System.in);
        System.out.println("Who are you?");
        name = scanner.nextLine();
        System.out.println(" How are you " + name + " ?");
        howareyou = scanner.nextLine();
        System.out.println("I'm glad to hear that you are doing good " + name +␣
↪".");
        PrintWriter outputStream = new PrintWriter(new FileWriter("output.
↪txt"));
```

```
        String [] output = {name,};
        for (int i = 0; i < output.length; i++)
        {
                outputStream.println(output[i]);
        }


        PrintWriter outputStream2 = new PrintWriter(new FileWriter("output.
↪txt"));
        String [] greeting = {howareyou,};
        for (int i = 0; i < greeting.length; i++)
        {
                outputStream.println(greeting[i]);
        }

        outputStream.close();

    }
```

Testing

[17]:
```
inputfile();
```

```
Hey! My name is bobby.I'm a chat bot.
Who are you?
 fazeel
 How are you fazeel ?
 good
I'm glad to hear that you are doing good fazeel.
```

[18]:
```
import java.io.*;

    String name;
    String howareyou;

    public static void outputfile() throws IOException
    {
        BufferedReader inStream = new BufferedReader(new FileReader("output.
↪txt"));

        String [] output = new String[1];
        System.out.println("Hey! My name is bobby.I'm a chat bot.");
        System.out.println("Who are you?");
        for (int i = 0; i < output.length; i++)
        {
```

```
            output[i] = inStream.readLine();
            System.out.println(output[i]);
        }

        BufferedReader inStream2 = new BufferedReader(new FileReader("output.
↪txt"));
        String [] greeting = new String[1];
        System.out.println(" How are you " + name + " ?");
        for (int i = 0; i < output.length; i++)
        {
            greeting[i] = inStream.readLine();
            System.out.println(greeting[i]);
        }
        inStream.close();
        System.out.println("I'm glad to hear that you are doing good " + name +␣
↪".");


    }
```

Testing

[19]:
```
outputfile();
```

```
Hey! My name is bobby.I'm a chat bot.
Who are you?
fazeel
 How are you null ?
good
I'm glad to hear that you are doing good null.
```

2.5.2 asking the first question

What it does asks the user weather they are male or female and does a different greeting for both. It also deals with input it does not understand

Implementation (how it works) uses if and if else conditions to ask a series of questions and print out the appropriate output.

[20]:
```
public static void question1() {
    System.out.println("are you a boy or a girl?");
    Scanner userinput = new Scanner(System.in);
    String gender = userinput.nextLine();

    if (gender.equals("boy")) {
        System.out.println("Nice to meet you brother.");
    } else if (gender.equals("girl")) {
        System.out.println("Nice to meet you sis.");
```

```
    } else {
        System.out.println("sorry,I dont understand");
    }
}
```

Testing

[21]:
```
question1();
```

```
are you a boy or a girl?

 boy

Nice to meet you brother.
```

2.5.3 asking questions about music

What it does asks the user weather they like music or not.If the user says no, it prints a output.IF the user user says yes, then it ask what type of music the user likes and prints a output for both

Implementation (how it works) Uses if and else if conditional statements to ask the user a series of questions and also print the appropriate output for the user for each question.

[22]:
```
public static void question2() {
    System.out.println("Do you like music?");
    Scanner music = new Scanner(System.in);
    String userinput = music.nextLine();

    if (userinput.equals("yes")) {
        System.out.println("Oh me too.");
        System.out.println("What type of music do you listen to?");

        Scanner type = new Scanner(System.in);
        String userinput2 = type.nextLine();

        if (userinput2.equals("rock")) {
            System.out.println("I love rock.");
        } else if (userinput2.equals("jazz")) {
            System.out.println("I dont listen to jazz that much.");
        }
    } else if (userinput.equals("no")) {
        System.out.println("What?");
        System.out.println("You dont like music?......okay.");
    }
}
```

Testing

[23]:
```
question2();
```

```
Do you like music?

 yes

Oh me too.
What type of music do you listen to?

 jazz

I dont listen to jazz that much.
```

2.5.4 making a movie playlist(array and nested loop)

What it does Asks the user about 4 movies and asks weather to make playlist using them.

Implementation (how it works) Creates a array using user input and uses a nested for loop on a while to ask the user weather they need the printed array or not.

[24]:
```
public static String inputString(String movie)
{
    String answer;
    Scanner scanner = new Scanner(System.in);
    System.out.println(movie);
    answer = scanner.nextLine();
    return answer;
}

public static void nameamovie() {
    final int numberofmovies = 4;


    System.out.println("I am guessing you like to watch movies");
    System.out.println("I can make you a movie playlist of any 4 movies of your␣
 ↪choice.");

    String[] nameofmovie = new String[numberofmovies];

    for (int moviename = 0; moviename < 4; moviename++) {
        nameofmovie[moviename] = inputString("Enter the name of a movie:");
    }
    System.out.println("Do you want to see your movie playlist?,otherwise type␣
 ↪'no' if you don't want one");
    Scanner playmovie = new Scanner(System.in);
    String playlist = playmovie.nextLine();



    while (!playlist.equals("no")) {
        System.out.println("This is your movie playlist:");
        for (int moviename = 0; moviename < 4; moviename++) {
```

```
            System.out.println(nameofmovie[moviename]);
        }
        playlist = "no";
    }

    return;
}
```

Testing

[26]:
```
nameamovie();
```

```
I am guessing you like to watch movies
I can make you a movie playlist of any 4 movies of your choice.
Enter the name of a movie:

 movie1

Enter the name of a movie:

 movie2

Enter the name of a movie:

 movie3

Enter the name of a movie:

 movie4

Do you want to see your movie playlist?,otherwise type 'no' if you don't want
one

 yes

This is your movie playlist:
movie1
movie2
movie3
movie4
```

2.5.5 Asking superhero names(records and access methods)

What it does Asks the user to tell the names of any superhero and it tells them what movie studio its from(DC/Marvel)

Implementation (how it works) Creates two records for dc and marvel and uses if and else if conditions through Accessor methods to tell the user what records their input belongs to.It also deals with input it does not know.

[27]:
```
class heronames
{
    String name;
```

```
    int charachters;
}
public static heronames Dc() {
    heronames uiverse1 = new heronames();
    uiverse1.name = "DC";
    uiverse1.charachters = 10000;
    System.out.println("So you like " + uiverse1.name + " movies.");
    System.out.print("fun fact:they have "+ uiverse1.charachters + " different␣
 ↪superheros.");

    return uiverse1;
}
public static heronames Marvel() {
    heronames uiverse2 = new heronames();
    uiverse2.name = "Marvel";
    uiverse2.charachters = 7000;
    System.out.println("So you like " + uiverse2.name + " movies.");
    System.out.print("fun fact:they have "+ uiverse2.charachters + " different␣
 ↪superheros.");

    return uiverse2;
}

public static void hero() {
    System.out.println("Who is your favorite superhero? ");
    Scanner input = new Scanner(System.in);
    String userinput = input.nextLine();

    if (userinput.equals("batman") || userinput.equals("superman") || userinput.
 ↪equals("the flash") || userinput.equals("cyborg") || userinput.
 ↪equals("wonder woman") || userinput.equals("joker")) {
        heronames answer1 = Dc();
    } else if (userinput.equals("Captain america") || userinput.equals("iron␣
 ↪man") || userinput.equals("the hulk") || userinput.equals("thor") ||␣
 ↪userinput.equals("spiderman") || userinput.equals("loki")) {
        heronames answer2 = Marvel();
    } else {
        System.out.print("Hmm I dont know that superhero.");
    }
}
```

Testing

[28]:
```
hero();
```

```
Who is your favorite superhero?

 batman
```

```
So you like DC movies.
fun fact:they have 10000 different superheros.
```

2.5.6 Bubble sort algorithm/passing an array

What it does It sorts numbers into acending order

Implementation (how it works) it makes a sort class and does a pass on it then it does a iteration on unsorted elements. it checks of the elements are in proper order or not,if they are not it swaps them.

[33]:
```
public static void useroutput()
{
    System.out.println("As a bot,I have been progammed with the ability to␣
 ↪rearange numbers using a bubble algoritham");
    System.out.println("I can rearrange the numbers: 6, 4, 5, 12, 2, 11, 9 in␣
 ↪acending order;");
}

class Sort
{
    public static void Sorting(int arrange[], int number)
    {
        if (number == 1)
        {
            return;
        }

        for (int i=0; i<number-1; i++)
        {
            if (arrange[i] > arrange[i+1])
            {
                int temp = arrange[i];
                arrange[i] = arrange[i+1];
                arrange[i+1] = temp;
            }
        }

        Sorting(arrange, number-1);
    }

    public static void pintt(int arrange[])
    {
        for (int i=0; i<arrange.length; ++i)
        {
            System.out.print(arrange[i]+" ");
        }
    }
```

```
    public static void main1()
    {
        Sort userinput = new Sort();
        int arrange[] = {6, 4, 5, 12, 2, 11, 9};
        Sorting(arrange, arrange.length);
        userinput.pintt(arrange);
    }
}
```

Testing

[34]:
```
useroutput();
main1();
```

```
As a bot,I have been progammed with the ability to rearange numbers using a
bubble algoritham
I can rearrange the numbers: 6, 4, 5, 12, 2, 11, 9 in acending order;
2 4 5 6 9 11 12
```

2.5.7 favorite food(ADT)

What it does asks the user about their favorite food. and ends the conversation.

Implementation (how it works) uses abstract data types to hide user input by get and set methods it also prints a ending message

[35]:
```
class food
{
    String dishes;
}

public static String getDishes(food t)
{
    return t.dishes;
}

public static food setDishes(food t, String dish)
{
    t.dishes = dish;
    return t;
}

public static void foods()
{
     food favfood = new food();

     favfood = setDishes(favfood, "that");
```

```
    String food;
    Scanner scanner = new Scanner(System.in);
    System.out.println("What is your favorite food?");
    food = scanner.nextLine();

    System.out.println("oh I have never tried " + getDishes(favfood) + "␣
↪before. I would love to try it one day.");
    System.out.println("I have to go now, nice talking with you.");
   return;

}
```

Testing

[36]:
```
foods();
```

```
What is your favorite food?

 pizza

oh I have never tried that before. I would love to try it one day.
I have to go now, nice talking with you.
```

2.5.8 Running the program

Run the following call to simulate running the complete program.

[38]:
```
inputfile();
question1();
question2();
nameamovie();
hero();
useroutput();
main1();
foods();
```

```
Hey! My name is bobby.I'm a chat bot.
Who are you?

 Fazeel

 How are you Fazeel ?

 fine

I'm glad to hear that you are doing good Fazeel.
are you a boy or a girl?

 boy
```

```
Nice to meet you brother.
Do you like music?

 yes

Oh me too.
What type of music do you listen to?

 rock

I love rock.
I am guessing you like to watch movies
I can make you a movie playlist of any 4 movies of your choice.
Enter the name of a movie:

 movie1

Enter the name of a movie:

 movie2

Enter the name of a movie:

 movie3

Enter the name of a movie:

 movie4

Do you want to see your movie playlist?,otherwise type 'no' if you don't want
one

 yes

This is your movie playlist:
movie1
movie2
movie3
movie4
Who is your favorite superhero?

 batman

So you like DC movies.
fun fact:they have 10000 different superheros.As a bot,I have been progammed
with the ability to rearange numbers using a bubble algoritham
I can rearrange the numbers: 6, 4, 5, 12, 2, 11, 9 in acending order;
2 4 5 6 9 11 12 What is your favorite food?

 pizza

oh I have never tried that before. I would love to try it one day.
I have to go now, nice talking with you.
```

2.6 The complete program

[8]:
```
//level 6
// Fazeel asim
// 7th decmber 2021
// VERSION 1
// chat bot



package com.company;

import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import java.util.Scanner;

class heronames
{
    String name;
    int charachters;
}
class Sort
{
    public static void pintt(int arrange[])
    {
        for (int i=0; i<arrange.length; ++i)
        {
            System.out.print(arrange[i]+" ");
        }
    }

}

//setting up a string for food//

class food
{
    String dishes;
}

public class Main {

    public static void main(String[] args)throws IOException {
        hello();
        question1();
        question2();
```

```
        nameamovie();
        hero();
        useroutput();
        main1();
        foods();

        System.exit(0);

        //starting the conversation//


    }

        public static void hello() throws IOException
        {
            System.out.println("Hey! My name is bobby.I'm a chat bot.");

            //asking the users name//

            String name;
            String howareyou;
            Scanner scanner = new Scanner(System.in);
            System.out.println("Who are you?");
            name = scanner.nextLine();
            System.out.println(" How are you " + name + " ?");
            howareyou = scanner.nextLine();
            System.out.println("I'm glad to hear that you are doing good " +␣
↪name + ".");

            //createing a stream object so you can access the file//

            PrintWriter inputStream = new PrintWriter(new FileWriter("myinput.
↪txt"));
            int userinput = 2;

            // Create an array with user input to store//

            String [] input = {name, howareyou,};

            // Store the userinput from the array in the file, one name per␣
↪line//

            for (int i = 0; i <input.length; i++)
            {
                //closing the file

                inputStream.println(input[i]);
```

```
            }
            inputStream.close();

            //createing a stream object so you can access the file//
            PrintWriter outputStream = new PrintWriter(new FileWriter("myoutput.
↪txt"));
            int useroutput = 4;

            // Create an array with user input to store//

            String [] output = {"Hey! My name is bobby.I'm a chat bot", "Who␣
↪are you?", "I'm glad to hear that you are doing good " + name + "."};

            // Store the user output from the array in the file, one name per␣
↪line//

            for (int i = 0; i <output.length; i++)
            {
                outputStream.println(output[i]);
            }
            //closing the file

            outputStream.close();

        }

                    //asking the users gender//

        public static void question1() {
            System.out.println("are you a boy or a girl?");
            Scanner userinput = new Scanner(System.in);
            String gender = userinput.nextLine();

            //using if and else if condtions to get specific output//

            if (gender.equals("boy")) {
                System.out.println("Nice to meet you brother.");
            } else if (gender.equals("girl")) {
                System.out.println("Nice to meet you sis.");
            } else {
                System.out.println("sorry,I dont understand");
            }
        }


                //asking the user a question about music//
```

```
    public static void question2() {
        System.out.println("Do you like music?");
        Scanner music = new Scanner(System.in);
        String userinput = music.nextLine();

        if (userinput.equals("yes")) {
            System.out.println("Oh me too.");
            System.out.println("What type of music do you listen to?");

            Scanner type = new Scanner(System.in);
            String userinput2 = type.nextLine();


            //using if and else if condtions to get specific output//

            if (userinput2.equals("rock")) {
                System.out.println("I love rock.");
            } else if (userinput2.equals("jazz")) {
                System.out.println("I dont listen to jazz that much.");
            }
        } else if (userinput.equals("no")) {
            System.out.println("What?");
            System.out.println("You dont like music?......okay.");
        }
    }


    public static String inputString(String movie)
    {
        String answer;
        Scanner scanner = new Scanner(System.in);
        System.out.println(movie);
        answer = scanner.nextLine();
        return answer;
    }

                    //asking the user to input movie names//

    public static void nameamovie() {

        //using a final integer for arraysize//

        final int numberofmovies = 4;


        System.out.println("I am guessing you like to watch movies");
```

```
            System.out.println("I can make you a movie playlist of any 4 movies␣
↪of your choice.");

                 //initilizing a array//

            String[] nameofmovie = new String[numberofmovies];

            for (int moviename = 0; moviename < 4; moviename++) {
                nameofmovie[moviename] = inputString("Enter the name of a movie:
↪");
            }
            System.out.println("Do you want to see your movie playlist?
↪,otherwise type 'no' if you don't want one");
            Scanner playmovie = new Scanner(System.in);
            String playlist = playmovie.nextLine();



            //using a nested for loop inside of a while loop//



            while (!playlist.equals("no")) {
                System.out.println("This is your movie playlist:");
                for (int moviename = 0; moviename < 4; moviename++) {
                    System.out.println(nameofmovie[moviename]);
                }
                playlist = "no";
            }

        }

                  //creating an record for dc//

        public static heronames Dc() {
            heronames uiverse1 = new heronames();
            uiverse1.name = "DC";
            uiverse1.charachters = 10000;
            System.out.println("So you like " + uiverse1.name + " movies.");
            System.out.print("fun fact:they have "+ uiverse1.charachters + "␣
↪different superheros.");

            return uiverse1;

            //creating a record for marvel//

        }
```

```
        public static heronames Marvel() {
            heronames uiverse2 = new heronames();
            uiverse2.name = "Marvel";
            uiverse2.charachters = 7000;
            System.out.println("So you like " + uiverse2.name + " movies.");
            System.out.print("fun fact:they have "+ uiverse2.charachters + "␣
↪different superheros.");

            return uiverse2;

            //putting in multiple conditions for each record//

        }
        public static void hero() {
            System.out.println("Who is your favorite superhero? ");
            Scanner input = new Scanner(System.in);
            String userinput = input.nextLine();

            if (userinput.equals("batman") || userinput.equals("superman") ||␣
↪userinput.equals("the flash") || userinput.equals("cyborg") || userinput.
↪equals("wonder woman") || userinput.equals("joker")) {
                heronames answer1 = Dc();
            } else if (userinput.equals("Captain america") || userinput.
↪equals("iron man") || userinput.equals("the hulk") || userinput.
↪equals("thor") || userinput.equals("spiderman") || userinput.equals("loki"))␣
↪{
                heronames answer2 = Marvel();
            } else {
                System.out.print("Hmm I dont know that superhero.");
            }
        }

                //using  if and else if statements for printing output//

         public static void useroutput()
         {
             System.out.println("As a bot,I have been progammed with the␣
↪ability to rearange numbers using a bubble algoritham");
             System.out.println("I can rearrange the numbers: 6, 4, 5, 12, 2,␣
↪11, 9 in acending order;");
         }

        public static void Sorting(int arrange[], int number)
        {
            if (number == 1)                    //doing pasess/
            {
                return;
```

```
            }

            for (int i=0; i<number-1; i++)       //iteration through unsorted elements//
            {
                if (arrange[i] > arrange[i+1])      //check if the elements are in order//
                {                                   //if not, swap them//
                    int temp = arrange[i];
                    arrange[i] = arrange[i+1];
                    arrange[i+1] = temp;
                }
            }

            Sorting(arrange, number-1);     //one pass done, proceed to the next//
        }


        public static void main1()
        {
            Sort userinput = new Sort();
            int arrange[] = {6, 4, 5, 12, 2, 11, 9};  //displaing the array//
            Sorting(arrange, arrange.length);
            userinput.pintt(arrange);
        }


            //setting up a scanner for userinput//


        public static String getDishes(food t)
        {
            return t.dishes;
        }

        public static food setDishes(food t, String dish)
        {
            t.dishes = dish;
            return t;
        }


        public static void foods()
        {
            //giving food set the dishes part of the food a new value returning the updated food//
```

```
            food favfood = new food();

            //starting the print//

            favfood = setDishes(favfood, "that");

            String food;
            Scanner scanner = new Scanner(System.in);
            System.out.println("What is your favorite food?");
            food = scanner.nextLine();

            //endng the conversation//

            System.out.println("oh I have never tried " + getDishes(favfood) +␣
↪" before. I would love to try it one day.");
            System.out.println("I have to go now, nice talking with you.");

        }


    }
```

```
|   package com.company;
illegal start of expression
```

END OF LITERATE DOCUMENT