

MPL 4

December 14, 2021

1 Mini Project

2 Level -4-

2.1 -Esad Simsek -

2.2 -06/12/2021-

2.3 Version -1-

2.4 Summary of the Question

- Write a chat bot procedural program that can have realistic conversations with people about a specific topic -

2.4.1 - Input_S -

What it does - This method allows the user to input a string to a reply for a question -

Implementation (how it works) - Prints the message and assigns an answer to the variable and then returns the variable-

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

Testing

```
[38]: Input_S("Is everything alright ?");
```

Is everything alright ?

yeah

```
[38]: yeah
```

2.4.2 – Input_i –

What it does – This method allows the user to input a integer to a reply for a question –

Implementation (how it works) – Prints the message and assigns an answer to the variable and then returns the variable –

```
[49]: public static int Input_i (String message)
      {
          int answer;
          Scanner scanner = new Scanner(System.in);
          System.out.println(message);
          answer = scanner.nextInt();
          return answer;
      }
```

Testing

```
[6]: Input_i(" What year were you born ?");
```

What year were you born ?

2003

```
[6]: 2003
```

2.4.3 – Class filmType –

What it does – Creates a new class called filmType –

Implementation (how it works) – This class has string variables which store the type of the film and aa response to it –

```
[50]: class filmType
      {
          String FilmTypeName;
          String typereply;
      }
```

2.4.4 – Chatbot_Greeting –

What it does – Says hi and asks the user how they are –

Implementation (how it works) – prints a message and afterwards the input_S method is used to ask how the user is –

```
[51]: public static void Chatbot_Greeting ()
      {
          System.out.println("Hello I am a Chatbot");
          Input_S("How are you?");
      }
```

```
}
```

Testing

```
[8]: Chatbot_Greeting();
```

```
Hello I am a Chatbot  
How are you?
```

```
I am good
```

2.4.5 – Chatbot_Interests –

What it does – The chatbot prints its interest and asks what the user likes. –

Implementation (how it works) – Prints its interest. Input_S is used to ask a question to the user. –

```
[52]: public static void Chatbot_Interests ()  
      {  
          System.out.println("I love to watch films and listen to music.");  
          String Chatbot_interests = Input_S("What do you like?");  
          System.out.println("So you like " + Chatbot_interests + "?");  
      }
```

Testing

```
[13]: Chatbot_Interests();
```

```
I love to watch films and listen to music.  
What do you like?
```

```
cars
```

```
So you like cars?
```

2.4.6 – CreateFilmType –

What it does – creates a new type of film with the information and the response that will be given by the chatbot. –

Implementation (how it works) – Using the record filmType it assign the given variables to a new record. –

```
[53]: public static filmType createFilmType (String FilmTypeName, String typereply)  
      {  
          filmType AA = new filmType();  
  
          AA.FilmTypeName = FilmTypeName;  
          AA.typereply = typereply;
```

```

        return AA;
    }

```

Testing

```

[16]: filmType horror = createFilmType("Horror", "Horror is Scary!");
        filmType romance = createFilmType("Romance", "Romance is boring");
        filmType superhero = createFilmType("Superhero", "Superhero films
        ↪are the best");

```

2.4.7 – printTypeReply –

What it does – Prints a reply from a record. –

Implementation (how it works) – Prints a reply from a record. –

```

[54]: public static void printTypeReply (filmType AA)
        {
            System.out.println(AA.typereply);
        }

```

Testing

```

[19]: printTypeReply(romance);

```

Romance is boring

2.4.8 – Film_type –

What it does – Gives responses to certain films inputed by user –

Implementation (how it works) – An if else statement is used where if the given film type matches a name in the record it gives a response if it doesnt match it says that it doesnt watch that type of film. –

```

[55]: public static void Film_type (String FilmGenre, filmType horror, filmType
        ↪romance, filmType superhero)
        {
            if (FilmGenre.equals(horror.FilmTypeName))
            {
                printTypeReply(horror);
            }
            else if (FilmGenre.equals(romance.FilmTypeName))
            {
                printTypeReply(romance);
            }
            else if (FilmGenre.equals(superhero.FilmTypeName))
            {

```

```

        printTypeReply(superhero);
    }
    else
    {
        System.out.println("I dont watch that type of film :( ");
    }
}

```

Testing

[25]: `Film_type("Romance", horror, romance, superhero);`

Romance is boring

2.4.9 – Movies –

What it does – the chatbot asks the user their favourite movie –

Implementation (how it works) – Prints a string, Input_S is used to ask a question to the user and calls Film_type method and its record to get a reply. –

[56]: `public static void Movies (filmType horror, filmType romance, filmType superhero)
{
 System.out.println("Let's talk about films");
 String Fav_film = Input_S("What's your favourite film type?");
 Film_type(Fav_film, horror, romance, superhero);
}`

Testing

[29]: `Movies (horror, romance, superhero);`

Let's talk about films

What's your favourite film type?

Horror

Horror is Scary!

2.4.10 – NewChatBot –

What it does – the chatbot asks the user if they would like to chat again. –

Implementation (how it works) – uses the Input_S method to ask a question and returns a answer when y is true –

[57]: `public static boolean NewChatBot()
{
 String answer = Input_S("Do you want to chat(y/n)?");
}`

```
        return answer.equals("y");
    }
```

Testing

```
[31]: NewChatBot();
```

Do you want to chat(y/n)?

y

```
[31]: true
```

2.4.11 – chatbot –

What it does – This is the method that runs the program –

Implementation (how it works) – A while loop is used only when NewChatBot has a true value. This method creates record types and calls the previous methods to run the program and prints bye when the loop is exited. –

```
[58]: public static void chatbot()
    {
        while(NewChatBot())
        {
            filmType horror = createFilmType("Horror", "Horror is Scary!");
            filmType romance = createFilmType("Romance", "Romance is boring");
            filmType superhero = createFilmType("Superhero", "Superhero films
→are the best");

            Chatbot_Greeting();
            Chatbot_Interests();
            Movies(horror, romance, superhero);
            System.out.println("It was nice speaking with you!");
        }
        System.out.println("Ok, time to go now. Bye!");
    }
```

Testing

```
[59]: chatbot();
```

Do you want to chat(y/n)?

y

Hello I am a Chatbot

How are you?

good

```
I love to watch films and listen to music.  
What do you like?
```

```
Cars
```

```
So you like Cars?  
Let's talk about films  
What's your favourite film type?
```

```
Superhero
```

```
Superhero films are the best  
It was nice speaking with you!  
Do you want to chat(y/n)?
```

```
n
```

```
Ok, time to go now. Bye!
```

2.4.12 Running the program

Run the following call to simulate running the complete program.

```
[45]: ChatBot();
```

```
Hello I am a Chatbot.  
How are you?
```

```
bad
```

```
I love to watch films and listen to music.  
What do you like?
```

```
cars
```

```
So you like cars?  
Let's talk about films  
What's your favourite film type?
```

```
horror
```

```
Horror is Scary!  
Ok, time to go now. Bye!
```

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.

```
[60]: // Esad Simsek  
      // 06/12/2021  
      // VERSION 1  
      // Write a chat bot program that can have realistic conversations with people  
      ↪about a specific topic
```

```

import java.util.Scanner;

class filmType
{
    String FilmTypeName;
    String typereply;
}

class chatbot
{
    public static void main (String [] a)
    {
        chatbot();
        System.exit(0);
    }

    public static String Input_S (String message)
    {
        String answer;
        Scanner scanner = new Scanner(System.in);

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

        return answer;
    }

    public static int Input_i (String message)
    {
        int answer;
        Scanner scanner = new Scanner(System.in);

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

        return answer;
    }

    public static void Chatbot_Greeting ()
    {
        System.out.println("Hello I am a Chatbot");
        Input_S("How are you?");
    }

    public static void Chatbot_Interests ()
    {

```



```

        System.out.println("I love to watch films and listen to music.");
        String Chatbot_interests = Input_S("What do you like?");
        System.out.println("So you like " + Chatbot_interests + "?");
    }

    public static filmType createFilmType (String FilmTypeName, String
    ↳typereply)
    {
        filmType AA = new filmType();

        AA.FilmTypeName = FilmTypeName;
        AA.typereply = typereply;

        return AA;
    }

    public static void printTypeReply (filmType AA)
    {
        System.out.println(AA.typereply);
    }

    public static void Film_type (String FilmGenre, filmType horror, filmType
    ↳romance, filmType superhero)
    {
        if (FilmGenre.equals(horror.FilmTypeName))
        {
            printTypeReply(horror);
        }
        else if (FilmGenre.equals(romance.FilmTypeName))
        {
            printTypeReply(romance);
        }
        else if (FilmGenre.equals(superhero.FilmTypeName))
        {
            printTypeReply(superhero);
        }
        else
        {
            System.out.println("I dont watch that type of film :( ");
        }
    }

    public static void Movies (filmType horror, filmType romance, filmType
    ↳superhero)
    {
        System.out.println("Let's talk about films");
        String Fav_film = Input_S("What's your favourite film type?");
    }

```

```

        Film_type(Fav_film, horror, romance, superhero);
    }

    public static boolean NewChatBot()
    {
        String answer = Input_S("Do you want to chat(y/n)?");
        return answer.equals("y");
    }

    public static void chatbot()
    {
        while(NewChatBot())
        {
            filmType horror = createFilmType("Horror", "Horror is Scary!");
            filmType romance = createFilmType("Romance", "Romance is boring");
            filmType superhero = createFilmType("Superhero", "Superhero films_
↪are the best");

            Chatbot_Greeting();
            Chatbot_Interests();
            Movies(horror, romance, superhero);
            System.out.println("It was nice to speaking with you!");
        }
        System.out.println("Ok, time to go now. Bye!");
    }
}

```

END OF LITERATE DOCUMENT