

# Chat Bot

December 16, 2021

## 1 MINI PROJECT

## 2 CHATBOT

### 3 Level 5

#### 3.1 Doga Sular

#### 3.2 Version 1

##### 3.2.1 Main Method

Main method only calls the chatbot method.

```
[ ]: public static void main (String [] args)
    {
        chatbot();
        System.exit(0);
    }
```

##### 3.2.2 chatbot Method

**What it does** //This method calls the other methods, creates film types and sets them.

**Implementation (how it works)** With if statements this method decides to exit the game or continue. Calls setter methods and creates new types. Calls other methods to run the program.

```
[ ]: public static void chatbot()
    {

        String answer = inputString("Do you want to chat(yes/no)?");

        if (answer.equals("yes")) {

            while (true) {
                filmType drama = new filmType();
                filmType comedy = new filmType();
                filmType horror = new filmType();
```

```

//I set 3 different types of films with the setter
↳methods.

setFilm(horror, "horror", "I never watch them as they
↳terrify me");
setFilm(drama, "drama", "I don't like dramas, they're
↳boring!");
setFilm(comedy, "comedy", "I love comedy movies as they
↳make me laugh.");

welcome();
films(horror, drama, comedy);
bookAdvice();
randomQuestion();

String ans = inputString("Would you like to
↳chat again? (yes/no)");

if (ans.equals("no")){

    print("Goodbye then");
    System.exit(0);

}

}
}

else {
    System.out.println("Oh that's sad. Bye.");
    System.exit(0);
}

}

```

### 3.2.3 welcome Method

**What it does** This method welcomes the user and asks basic questions.

**Implementation (how it works)** In this method only print and scanner functions was used by calling the inputString and print methods.

```

[ ]: //This method welcomes the user and asks basic questions.
    public static void welcome ()
    {
        print("Hello! It's your new friend Chatbot");

        String username = inputString("What is your name?");
    }

```

```

        print("Nice to meet you " + username + ".");

        inputString("How are you doing?");

        print("I would like to get to know you better.");

        int age = inputInt("How old are you?");
        print("You are " + age + "? I am 18!");

        String nationality = inputString("Btw, i am from Turkey. Where
↪are you from?");
        print("Oh! That's cool.");

        print("I like to do programming exercices in my free time.");
        String freetime = inputString("What do you like do in your free
↪time?");

        print("So you like to " + freetime + "?");

    }

```

### 3.2.4 films Method

**What it does** This method asks a question concerning the records created.

**Implementation (how it works)** Asks the question. Than calls another method and passes the variables needed to it.

```

[ ]: //This method asks a question concerning the records created. Than calls
↪another method and passes the variables needed to it.
    public static void films (filmType horror, filmType drama, filmType
↪comedy)
    {

        print("What about films?");

        String filmInput = inputString("What's your favourite movie
↪genre?");

        movieGenre(filmInput, horror, drama, comedy);

    }

```

### 3.2.5 movieGenre Method

**What it does** This method prints responses according the inputed film genre.

**Implementation (how it works)** With if and else statements related response is printed.

```
[ ]: //This method prints responses according the inputed film genre.
    public static void movieGenre (String genre, filmType horror,filmType
    ↪drama, filmType comedy)
    {
        if (genre.equals(getname(horror)))
        {
            print(getresponse(horror));
        }
        else if (genre.equals(getname(drama)))
        {
            print(getresponse(drama));
        }
        else if (genre.equals(getname(comedy)))
        {
            print(getresponse(comedy));
        }
        else
        {
            print("I don't have any idea about those films actually!
    ↪");
        }
    }
}
```

### 3.2.6 bookAdvice Method

**What it does** This method asks the user to give some book advices.

**Implementation (how it works)** This method asks the user to input some strings, creates a string array and collects inputs in it. Lastly the bookAdvice method prints the elements of the array.

```
[ ]: //This method asks the user to input some strings, creates a string array and
    ↪collects inputs in it.
    //Lastly the bookAdvice method prints the elements of the array.
    public static void bookAdvice () {

        System.out.println("Beside films i really like to read books i
    ↪think you can give me some book advices so i can read them.");
        int bookNumber = inputInt("How many books would you like to
    ↪cite?");
        String[] favbooks = createArray("What's the book's name?",
    ↪bookNumber);
        print("Here is a list of the books that you've named. I will
    ↪definitely read them.");
        printArray(bookNumber, favbooks);

    }
}
```

### 3.2.7 randomQuestion Method

**What it does** This method generates a random question to ask to the user.

**Implementation (how it works)** A new string array is created and the questions are stored in it. And with the random function a position in the array is randomly accessed.

```
[ ]: //This method generates a random question to ask to the user.
    public static void randomQuestion() {

        print("So...");

        String [] questions = new String [3];

        questions [0] = ("Do you have any pets");
        questions [1] = ("What is your favourite food.");
        questions [2] = ("Do you like to play video games?");

        Random random = new Random();

        int questionNumber = random.nextInt(3);

        questionNumber +=1;

        inputString(questions [questionNumber]) ;

        if (questionNumber == 0) {

            System.out.println("Oh, i have a dog named Pablo.");
        }

        else if (questionNumber == 1) {

            System.out.println("Sounds good. What is the origin of_
↳this dish? My favorite is hamburger.");
        }

        else if (questionNumber == 2) {

            System.out.println("Oh yeah? My favourite is Super_
↳Mario.");
        }

    }
```

### 3.2.8 createArray Method

**What it does** This method creates a String array.

**Implementation (how it works)** With a for loop the inputs are collected in an array.

```
[ ]: //This method creates a String array.
    public static String[] createArray(String message, int s)
    {
        String [] a = new String [s];
        for(int i = 0; i<s; i++)
        {
            a [i] = inputString(message + (i+1) + "?");
        }
        return a;
    }
```

### 3.2.9 printArray Method

**What it does** This method prints the elements of the array.

**Implementation (how it works)** With a for loop the positions in the array are accessed and the elements of the array are printed.

```
[ ]: //This method prints the elements of the array.
    public static void printArray(int s, String[] a)
    {
        for(int i = 0; i<s; i++)
        {
            System.out.println(i+1 + ". " + a[i]);
        }
        return;
    }
```

### 3.2.10 getresponse Method

**What it does** This is a getter method. We can access the record variable “response” via this method.

**Implementation (how it works)** The variable of the record is accessed and returned to use in another part of the program

```
[ ]: //This method gets the response variable from the given record.
    public static String getresponse (filmType film)
    {
        return film.response;
    }
```

### 3.2.11 getname Method

**What it does** This is a getter method. We can access the record variable “name” via this method.

**Implementation (how it works)** The variable of the record is accessed and returned to use in another part of the program

```
[ ]: //This method gets the name variable from the given record.
    public static String getname (filmType film)
    {
        return film.name;
    }
```

### 3.2.12 setFilm Method

**What it does** This is a setter method. It is used to create a new record type.

**Implementation (how it works)** The variables in the record are accessed by getter methods then they are assigned to desired values.

```
[ ]: //This is a setter method which reaches the record by getters.
    public static filmType setFilm (filmType film, String given_name,String
    ↳inputresponse)
    {
        film.name = given_name;
        film.response = inputresponse;
        return film;
    }
```

## 3.3 THE COMPLETE PROGRAM

```
[ ]: package chatbot;
import java.util.Random;
import java.util.Scanner;

//Creating a record class
class filmType
{
    String name;
    String response;
}

public class Chatbot {

    public static void main (String [] args)
    {
```

```

        chatbot();
        System.exit(0);
    }

    //This method calls the other methods, creates film types and sets them.
    public static void chatbot()
    {

        String answer = inputString("Do you want to chat(yes/no)?");

        if (answer.equals("yes")) {

            while (true) {

                filmType drama = new filmType();
                filmType comedy = new filmType();
                filmType horror = new filmType();

                //I set 3 different types of films with the setter
                ↪methods.

                setFilm(horror, "horror", "I never watch them as they
                ↪terrify me");
                setFilm(drama, "drama", "I don't like dramas, they're
                ↪boring!");
                setFilm(comedy, "comedy", "I love comedy movies as they
                ↪make me laugh.");

                welcome();
                films(horror, drama, comedy);
                bookAdvice();
                randomQuestion();

                String ans = inputString("Would you like to
                ↪chat again? (yes/no)");
                if (ans.equals("no")){

                    print("Goodbye then");
                    System.exit(0);

                }

            }

        }

        else {

```



```

        System.out.println("Oh that's sad. Bye.");
        System.exit(0);
    }
}

//This method welcomes the user and asks basic questions.
public static void welcome ()
{
    print("Hello! It's your new friend Chatbot");

    String username = inputString("What is your name?");

    print("Nice to meet you " + username + ".");

    inputString("How are you doing?");

    print("I would like to get to know you better.");

    int age = inputInt("How old are you?");
    print("You are " + age + "? I am 18!");

    String nationality = inputString("Btw, i am from Turkey. Where
↪are you from?");
    print("Oh! That's cool.");

    print("I like to do programming exercices in my free time.");
    String freetime = inputString("What do you like do in your free
↪time?");
    print("So you like to " + freetime + "?");
}

//This method asks a question concerning the records created. Than
↪calls another method and passes the variables needed to it.
public static void films (filmType horror, filmType drama, filmType
↪comedy)
{
    print("What about films?");

    String filmInput = inputString("What's your favourite movie
↪genre?");

    movieGenre(filmInput, horror, drama, comedy);
}

```

```

//This method prints responses according the inputed film genre.
public static void movieGenre (String genre, filmType horror,filmType
↳drama, filmType comedy)
{
    if (genre.equals(getname(horror)))
    {
        print(getresponse(horror));
    }
    else if (genre.equals(getname(drama)))
    {
        print(getresponse(drama));
    }
    else if (genre.equals(getname(comedy)))
    {
        print(getresponse(comedy));
    }
    else
    {
        print("I don't have any idea about those films actually!
↳");
    }
}

//This method asks the user to input some strings, creates a string array
↳and collects inputs in it.
//Lastly the bookAdvice method prints the elements of the array.
public static void bookAdvice () {

    System.out.println("Beside films i really like to read books i
↳think you can give me some book advices so i can read them.");
    int bookNumber = inputInt("How many books would you like to
↳cite?");
    String[] favbooks= createArray("What's the book's name?",
↳bookNumber);
    print("Here is a list of the books that you've named. I will
↳definitely read them.");
    printArray(bookNumber, favbooks);

}

//This method generates a random question to as to the user.
public static void randomQuestion() {

    print("So...");

```

```

String [] questions = new String [3];

questions [0] = ("Do you have any pets");
questions [1] = ("What is your favourite food.");
questions [2] = ("Do you like to play video games?");

Random random = new Random();

int questionNumber = random.nextInt(3);

questionNumber +=1;

inputString(questions [questionNumber]) ;


if (questionNumber == 0) {

    System.out.println("Oh, i have a dog named Pablo.");
}

else if (questionNumber == 1) {

    System.out.println("Sounds good. What is the origin of_
↪this dish? My favorite is hamburger.");
}

else if (questionNumber == 2) {

    System.out.println("Oh yeah? My favourite is Super_
↪Mario.");
}

}


// This method is to collect string input from the user.
//In any part of the code the if the user enters "goodbye" or "got to_
↪go" in the keyboard the chat bot game ends.
public static String inputString (String message)
{
    String answer;
    Scanner scanner = new Scanner(System.in);
    System.out.println(message);
    answer = scanner.nextLine();

    if (answer.equals("Goodbye")){

```

```

        System.out.println("Bye.");
        System.exit(0);
    }

    if (answer.equals("Got to go")){

        System.out.println("Bye.");
        System.exit(0);

    }
    return answer;
}

// This method is to collect string input from the user.
public static int inputInt (String message)
{
    int answer;
    Scanner scanner = new Scanner(System.in);
    System.out.println(message);
    answer = scanner.nextInt();
    return answer;
}

// This method is to print messages.
public static void print (String message)
{
    System.out.println(message);
}

//This method creates a String array.
public static String[] createArray(String message, int s)
{
    String [] a = new String [s];
    for(int i = 0; i<s; i++)
    {
        a [i] = inputString(message + (i+1) + "?");
    }
    return a;
}

//This method prints the elements of the array.
public static void printArray(int s, String[] a)
{
    for(int i = 0; i<s; i++)
    {
        System.out.println(i+1 + ". " + a[i]);
    }
}

```

```

        }
        return;
    }

    //This method gets the response variable from the given record.
    public static String getresponse (filmType film)
    {
        return film.response;
    }

    //This method gets the name variable from the given record.
    public static String getname (filmType film)
    {
        return film.name;
    }

    //This is a setter method which reaches the record by getters.
    public static filmType setFilm (filmType film, String given_name,String
↪inputresponse)
    {
        film.name = given_name;
        film.response = inputresponse;
        return film;
    }
}

```