

CMPE150 PROJECT 2 REPORT

1) Problem Description:

This project requires to assess individuals who applied to the MARS Enterprises to get a job. MARS Enterprises has a solution for this problem. By creating an interviewing program, the company reduces the time for the face-to-face interviewing.

2) Problem Solution:

To solve this problem, I've devised a program which evaluates the individual's personal backgrounds in many ways such that age, military service, the position which the individual applies for, driving license etc. At this program, my main section includes 4 methods namely `intro()`, `firstStep()`, `secondStep()` and `thirdStep()`.

`Intro()` method is the funny part of the program and just asks candidate types 1 and press enter. And the program continues with the second method which is `firstStep()`.

`firstStep()` is the part that requires input in types of `String` and `int`. It is expected that user must type his/her name and furthermore, age must be entered. If the candidate's age is below 18, the program shuts itself down and prints a statement that explains the user is not compatible for this job. On the other hand, if the age is above 18, program accepts the user's age as a valid age and continues with the next method.

`secondStep()` is the optional part that asks the candidate's sex. If the user is male, there is another restriction which is the user should have completed his military service. If not, the candidate is rejected.

Nevertheless; if the user is female, there is no obligation such as military service and the program proceeds with the next method.

`thirdStep()` is the core part that asks the candidate's desired position at the MARS Enterprises. Depending on the user's answer, the program proceeds further with 3 submethods namely `softwareEngineer()`, `accountant()` and `academic()`.

`softwareEngineer()` method is made for the candidates whose desire is to become a software engineer. The individual is inquired in many ways such that whether his/her experience is enough to work, whether he/she has got a graduate degree or the major etc. Then, with many evaluations, the method decided whether the user is worthy to be employed.

`accountant()` method is done for the accountant candidates. Its logic is same with the previous method. By asking some questions to the user such that whether the user has a driving license, or the number of people the user has a connection with etc. Then evaluations of that questions show that the user's abilities and decides the user's fate.

`academic()` is the method of the academic candidates. It asks candidates whether they love to teach or how many papers they've published etc. With appropriate answers, this method says the user has enough skills to work in MARS Enterprises.

Deep down, there is an inner method which is `pcLang()`, which takes variables from the scanner and returns an Integer to its summoner method, evaluates the candidates, who want the software engineer position, by the amount of the programming language. There is an Integer named `count` inside this method. When the user says yes for each question, the Integer 'count' is incremented. And finally, the count is returned to the method `thirdStep()`.

Finally, there is a fun method named as `finalAnswer()` that takes a variable by console and returns a String variable to the summoner method. This method says that the candidate is very well compatible to the requirements and asks the user whether the user wants to work in the MARS Enterprises.

3) Implementation:

```
import java.util.*;
public class 002016400198 {

    public static void main(String[] args) {
        Scanner console = new Scanner(System.in);
        //This is the introduction part of my code. There is a smooth and
        funny entrance part by requesting from user to type 1 and press enter.
        //Then firstStep method initializes.
        intro(console);
        //this method is created to gather user's name and age to proceed
        further steps. Evaluation of the user's age is important,
        //because the restrictions implies that user should be equal or more
        than 18 years old.
        firstStep(console);
        //this method is created to gather the information of user's sex to
        determine whether or not user is male.
        //If the user is male, the method requires whether or not user has
        completed his military service.
        secondStep(console);
        //this method is the core part of my program, because it requires the
        name of the job which the user applies for.
        //and it has submethods that helps this method to evaluate the user.
        thirdStep(console);
    }
    public static void intro(Scanner console){
        System.out.println("Welcome to the MARS Enterprises.");

        System.out.println("For the security of both of the sides, your
        informations are secured with MARS Security.");
        System.out.println("This program was designed to elect among
        individuals \nwho may become the possible employee of our company. ");
        System.out.println("If you are ready, confirm that you are no robot
        by typing 1 and pressing enter.");
        //commence is the string variable I request from user to determine
        whether or not the user is human.
        String commence = console.nextLine();
        if (commence.equals("1")){
            System.out.println("Status: You are allowed to proceed.");
        }
        else{
            System.out.println("ERROR: Inorganic invasion. Immediate
            termination NOW!!!!");
            System.exit(1);
        }
    }
    public static void firstStep(Scanner console){
```

```

        System.out.println("To avoid a boring worklife and working
environment,\nMARS Enterprises is looking for some funny people with amazing
background.\nAre you worthy to become the next generation of JOKE?");
        System.out.println("Let's begin with the first question. What's the
word which the people call y0u?");
        String name = console.nextLine();
        System.out.println("Hello " + name + ".");
        if(name.toUpperCase().charAt(0) == 'M'){
            System.out.println("What a nice name. \nYou have a head
start from the beginning. Very Nice! :)");
        }
        else {
            System.out.println("Your parents should name you with a
name starting with M. \nWhat a shame! :)");
        }
        System.out.println("Now, let's learn your age. \nHow many year passed
since you were extracted from your mother's belly?");
        int age = console.nextInt();
        if (age >= 18){
            System.out.println("You have lived long enough without
us. \nNow live with us if you are worthy.");
            System.out.println("First step is completed.
\nProceeding with second step now.");
        }
        else{
            System.out.println("Your mother had a big mistake when
she gave birth to you at a late time. \nShe should have done it way before.");
            System.out.println("Sorry, but you are not old enough to
make a difference in our company. \nCome later again. ");
            System.exit(1);
        }
    }
    public static void secondStep(Scanner console){

        System.out.println("Here we are at the second step. That's an easy
one, I guarantee you.");
        System.out.println("Tell me you sex: Male or Female?");
        //sex is the string variable I request from user to determine the sex
to generate input for the next logical evaluation which is whether the user is man
or woman.
        String sex = console.next();
        if (sex.toLowerCase().equals("male")){

            System.out.println("Wow. You are a man, I see. But are you a
real man? \nHave you completed your military service? Type \"yes\" or \"no\".");
            String militaryService = console.next();
            if(militaryService.toLowerCase().equals("yes")){

                System.out.println("You're amazing maaan. I knew you are
one of those superpowered patriots. Yehhhuu!");
                System.out.println("Okay then. Let's continue with the
basis of this auto-interviewing program. The position...");
            }
            else if (militaryService.toLowerCase().equals("no")){
                System.out.println("What a shame! Before I report you to
the military garnison in this city, get out of our company, NOW YOU COWARD!!!");
                System.exit(1);
            }
        }
        else{

```

```

        System.out.println("Unknown command: Shutdown
initiated.");
        System.exit(1);
    }
}
else if(sex.toLowerCase().equals("female")){
    System.out.println("I see, you are very well-looking female.
You may become our face model maybe, what do you say?");
    System.out.println("I think you should continue. :)");
}
else{
    System.out.println("Undefined type of sex. Possible invasion of
machines. Termination engaged.");
    System.exit(1);
}
}
public static void thirdStep(Scanner console){
    System.out.println("Here we are, at the gate of your career. Tell me
my possible fellow employee,");
    System.out.println("Which department are you making an
application?");
    System.out.println("Type the number of the job you're applying for.
");
    System.out.println("1 - Software Engineer");
    System.out.println("2 - Accountant");
    System.out.println("3 - Academic");
    console.nextLine();
    String position = console.nextLine();

    if(position.equals("1")){
        softwareEngineer(console);
    }
    else if(position.equals("2")){
        accountant(console);
    }
    else if(position.equals("3")){
        academic(console);
    }
    else {
        System.out.println("Undefined position. Program is closed.");
        System.exit(1);
    }
}
//this method decides the user has all the requirements of the company's
traits. By taking variables at multiple types,
//this method makes an assessment about the user and determines whether the
user is worthy for the position or not.
public static void softwareEngineer(Scanner console){
    System.out.println("Now, tell me. What was the major in your
university?");
    System.out.println("To get the job, you should have studied one of
these majors written below.");
    System.out.println("Type the number of the major you've studied: ");
    System.out.println("1- Software Engineering");
    System.out.println("2- Computer Engineering");
    System.out.println("3- Computer Sciences");
    String major = console.nextLine();
    if(major.equalsIgnoreCase("1")){

```

```

        if(pcLang(console)>=2){
            System.out.println("Great. You have some skills I
see.");
            System.out.println("But, do you have work experience
?");
            System.out.println("How many years did you worked before
applying our corporation as a software engineer?");
            int year = console.nextInt();
            System.out.println("Let me ask you another question. Do
you have a graduate degree on software engineering? Type \"yes\" or \"no\".");
            console.nextLine();
            String answer = console.nextLine();
            if(year>=3 || answer.equalsIgnoreCase("yes")){
                System.out.println("You are a very qualified
individual I see. With this background, you should be able to work in our
company.");
                System.out.println(finalAnswer(console));
            }
            else{
                System.out.println("Sorry, but we've expected
higher traits of you. Maybe next time...");
                System.exit(1);
            }
        }
        else{
            System.out.println("Communication is the deal, but
communication with computers is the real deal.");
            System.exit(1);
        }
    }
    else if (major.equalsIgnoreCase("2")){
        if(pcLang(console)>=2){
            System.out.println("Great. You have some skills I
see.");
            System.out.println("But, do you have work experience
?");
            System.out.println("How many years did you worked before
applying our corporation as a software engineer?");
            int year = console.nextInt();
            System.out.println("Let me ask you another question. Do
you have a graduate degree on software engineering? Type \"yes\" or \"no\".");
            console.nextLine();
            String answer = console.nextLine();
            if(year>=3 || answer.equalsIgnoreCase("yes")){
                System.out.println("You are a very qualified
individual I see. With this background, you should be able to work in our
company.");
                System.out.println(finalAnswer(console));
            }
            else{
                System.out.println("Sorry, but we've expected
higher traits of you. Maybe next time...");
                System.exit(1);
            }
        }
        else{
            System.out.println("Communication is the deal, but
communication with computers is the real deal.");

```

```

        System.exit(1);
    }
}
else if (major.equalsIgnoreCase("3")){
    if(pcLang(console)>=2){
        System.out.println("Great. You have some skills I
see.");
        System.out.println("But, do you have work experience
?");
        System.out.println("How many years did you worked before
applying our corporation as a software engineer?");
        int year = console.nextInt();
        System.out.println("Let me ask you another question. Do
you have a graduate degree on software engineering? Type \"yes\" or \"no\".");
        console.nextLine();
        String answer = console.nextLine();
        if(year>=3 || answer.equalsIgnoreCase("yes")){
            System.out.println("You are a very qualified
individual I see. With this background, you should be able to work in our
company.");
            System.out.println(finalAnswer(console));
        }
        else{
            System.out.println("Sorry, but we've expected
higher traits of you. Maybe next time...");
            System.exit(1);
        }
    }
    else{
        System.out.println("Communication is the deal, but
communication with computers is the real deal.");
        System.exit(1);
    }
}
else {
    System.out.println("Unknown type : Shutdown initiated.");
    System.exit(1);
}
}
//this method decides the user has all the requirements of the company's
traits. By taking variables at multiple types,
//this method makes an assessment about the user and determines whether the
user is worthy for the position or not.
public static void accountant(Scanner console){
    System.out.println("Do you have an accounting degree? Type \"yes\" or
\"no\". ");
    String answer = console.next();
    if(answer.equals("yes")){
        System.out.println("Great. Then, do you know how to use Excel
very well? Type \"yes\" or \"no\".");
        String answer2 = console.next();
        if(answer2.equals("yes")){
            System.out.println("Wonderful. By the way let me ask you
another questions.");
            System.out.println("First question is do you speak
English fluently?");
            System.out.println("And the second is do you have
friends who can translate English for you?");
            System.out.println("Type \"yes\" or \"no\" for both.");

```

```

        String answer3 = console.next();
        String answer4 = console.next();
        if (answer3.equals("yes") || answer4.equals("yes")){
            System.out.println("How many people do you know in
MARS Enterprises? ");
            int num = console.nextInt();
            if(num >=2 ){
                System.out.println("Final question : Do you
have a driving license? That's very important that you have one.");
                System.out.println("Type \"yes\" or \"no\".
Last question btw. You can do it! :)");
                String finanswer = console.next();
                if(finanswer.equals("yes")){
                    System.out.println("OH MY GOD! The
person we are looking for is you. You will be one of us if you choose to accept
our conditions.");
                    System.out.println("Thanks for so
much effort and time. Waiting your final answer. :D");

                    System.out.println(finalAnswer(console));
                }
                else{
                    System.out.println("Ah. You were so
close to get this job, but not enough I see. Before next time, learn where the
handbrake is.");
                    System.exit(1);
                }
            }
            else if(num<2 && 0<num){
                System.out.println("Sorry but your business
network inside our organization is too small. Until next time try to make new
friends, okay?");
                System.exit(1);
            }
            else{
                System.out.println("Illogical situation.
Termination is begun.");
                System.exit(1);
            }
        }
        else{
            System.out.println("Dude what's the meaning of
that. Are you saying that you can't even speak to someone who knows English?");
            System.out.println("That's unacceptable. Can you
even understand what I am saying? ");
            System.out.println("Let me give you the address of
our Language Education Center. Good luck until next time! ");
            System.exit(1);
        }
    }
    else{
        System.out.println("Hmm. Let me arrange you some
personal improvement class at Boðaziçi University Computer Engineering.");
        System.out.println("I'm sure they are way too
experienced that you need but they'll help you to learn some Excel.");
        System.out.println("Maybe you can learn it on your own.
Your choice at the end. Goodbye!");
        System.exit(1);
    }
}

```



```

    }
    else{
        System.out.println("Why did you even apply for this job without
a accounting major? Go to a university to save yourself from your ignorance.");
        System.exit(1);
    }
}
//this method decides the user has all the requirements of the company's
traits. By taking variables at multiple types,
//this method makes an assessment about the user and determines whether the
user is worthy for the position or not.
public static void academic(Scanner console){

    System.out.println("You want to be our academic. Okay then. Can you
speak English?");
    System.out.println("Type \"yes\" or \"no\".");
    String answer = console.next();
    if(answer.equals("yes")){
        System.out.println("How many papers have you published since
the beginning your academic career?");
        int num = console.nextInt();
        if(num >=3){
            System.out.println("Excellent work. Final question is at
hand.");
            System.out.println("Do you love to teach? Type \"yes\"
or \"no\".");
            String answer2 = console.next();
            if(answer2.equals("yes")){
                String output = finalAnswer(console);
                System.out.println(output);
            }
            else {
                System.out.println("An academic who was raised by
and academic should at least love his/her job. Sorry but you can't sit with us.");
                System.exit(1);
            }
        }
        else if (0<num && num<3){
            System.out.println("You should have published more
papers. I assume you haven't learned the complete of your major. Work harder!!!
See ya :)");
            System.exit(1);
        }
        else {
            System.out.println("Have you ever publish a paper? I am
just curious. However, this conversation is over.");
            System.exit(1);
        }
    }
    else {
        System.out.println("In our world, everything uses English to
communicate with each other.\nYou may not understand what I'm saying, but basicly,
\"NOT ENGLÝSH,JUST ENGLISH\");
        System.exit(1);
    }
}
//this method decides whether the user knows equal or more than 2 languages
or not. It takes data from scanner and

```

```

//return the number of the languages which user knows.
public static int pcLang(Scanner console){
    int count = 0;
    System.out.println("Now, let me ask you some questions.");
    System.out.println("Do you know how to program in Java? Type \"yes\" or \"no\".");
    String answer = console.nextLine();
    if(answer.equalsIgnoreCase("yes")){
        count++;
    }
    else if(answer.equalsIgnoreCase("no")){
        System.out.println("Java is not just the coffee, mate. Learn some.");
    }
    else{
        System.out.println("Wrong input. Shutdown initiated.");
        System.exit(1);
    }
    System.out.println("Do you know how to program in C? Type \"yes\" or \"no\".");
    String answer2 = console.nextLine();
    if(answer2.equalsIgnoreCase("yes")){
        count++;
    }
    else if(answer2.equalsIgnoreCase("no")){
        System.out.println(":('");
    }
    else{
        System.out.println("Wrong input. Shutdown initiated.");
        System.exit(1);
    }
    System.out.println("Do you know how to program in Prologue? Type \"yes\" or \"no\".");
    String answer3 = console.nextLine();
    if(answer3.equalsIgnoreCase("yes")){
        count++;
    }
    else if(answer3.equalsIgnoreCase("no")){
        System.out.println("What a pity.");
    }
    else{
        System.out.println("Wrong input. Shutdown initiated.");
        System.exit(1);
    }
    return count;
}

//this is the optional method I've created to reduce the monotonous aura of the program.
public static String finalAnswer(Scanner console){
    System.out.println("There is no problem for hiring you. But do you want to be a part of us?");
    System.out.println("Type \"yes\" or \"no\".");
    String FinalAnswer = console.next();
    if(FinalAnswer.equals("yes")){
        return "You have passed all the questions. By the rules of MARS Enterprises, I hereby commission you under MARS Enterprises.\nWelcome to outer space, my fellow colleague! Live the way you live!!!";
    }
}

```

```

else {
    return "I wish I could change your mind. But, maybe that's how
it should be after all. Be careful and successful at your life. Thanks for your
interest. Bye Bye !!!";
}
}
}

```

4) Output of the program:

1.

```

Welcome to the PARS Enterprises.
For the security of both of the sides, your informations are secured with PARS Security.
This program was designed to select among individuals
who may become the possible employee of our company.
If you are ready, confirm that you are no robot by typing 1 and pressing enter.
1
Status: You are allowed to proceed.
To avoid a boring worklife and working environment,
PARS Enterprises is looking for some funny people with amazing background.
Are you worthy to become the next generation of JOKI?
Let's begin with the first question. What's the word which the people call you?
orgarcan-otlas.
Hello orgarcan-otlas.
Your parents should name you with a name starting with H.
What a shame! :-(
Now, let's learn your age.
How many year passed since you were extracted from your mother's belly?
18
You have lived long enough without us.
Now live with us if you are worthy.
First step is completed.
Proceeding with second step now.
Here we are at the second step. That's an easy one, I guarantee you.
Tell me you sex: Male or female?
male
Now, You are a man, I see. But are you a real man?
Have you completed your military service? Type "yes" or "no".
yes
You're amazing man. I know you are one of those superpowered patriots. Yehhhuu!
Okay then, let's continue with the basis of this auto-interviewing program. The position...
Here we are, at the gate of your career. Tell me my possible fellow employee,
which department are you making an application?
Type the number of the job you're applying for.
1 - Software Engineer
2 - Accountant
3 - Academic
1
Now, tell me, what was the major in your university?
To get the job, you should have studied one of these majors written below.
Type the number of the major you've studied.
1 - Software Engineering
2 - Computer Engineering
3 - Computer Sciences
1

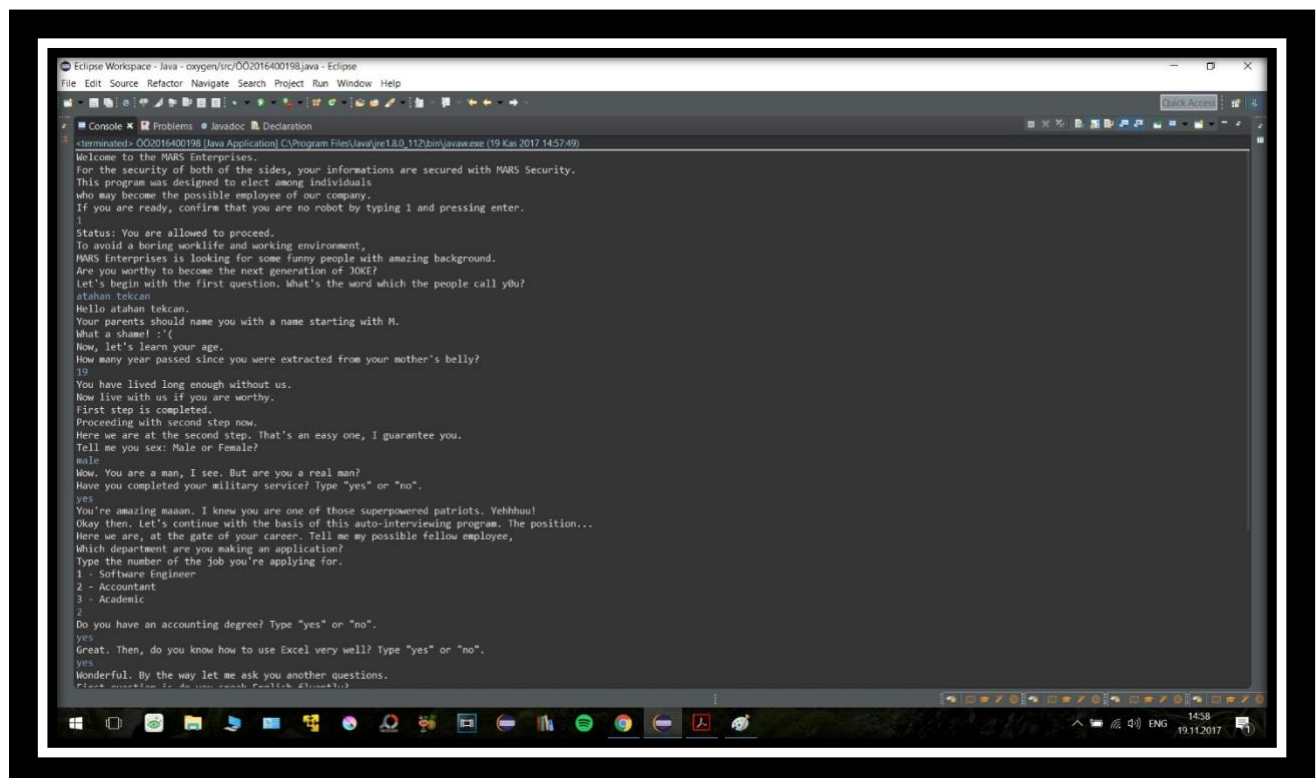
```

```

Now, let me ask you some questions.
Do you know how to program in Java? Type "yes" or "no".
yes
Do you know how to program in C? Type "yes" or "no".
yes
Do you know how to program in Prolog? Type "yes" or "no".
yes
Great. You have some skills I see.
But, do you have work experience?
How many years did you worked before applying our corporation as a software engineer?
1
Let me ask you another question. Do you have a graduate degree on software engineering? Type "yes" or "no".
yes
You are a very qualified individual I see. With this background, you should be able to work in our company.
There is no problem for hiring you. But do you want to be a part of us?
Type "yes" or "no".
yes
You have passed all the questions. By the rules of PARS Enterprises, I hereby commission you under PARS Enterprises.
Welcome to enter space, my fellow colleague! Live the way you live!!!

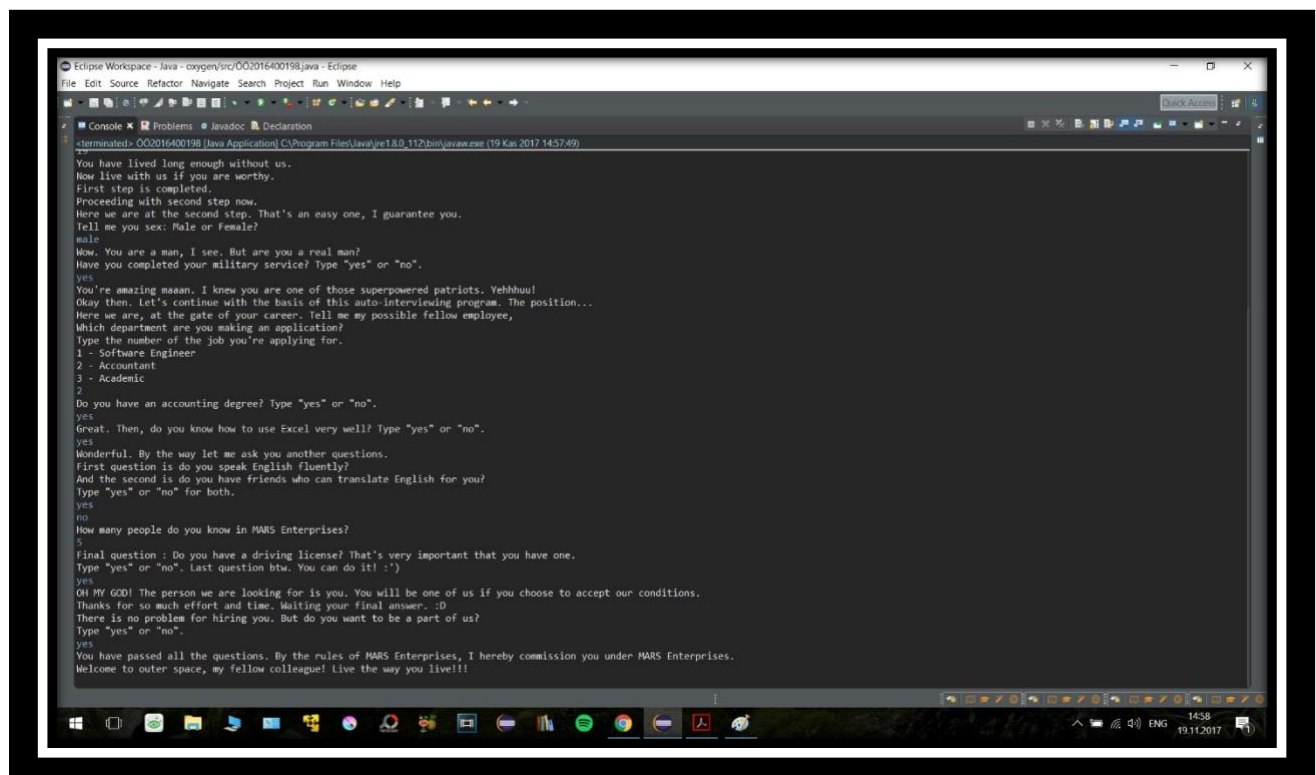
```

2.



The screenshot shows the Eclipse IDE interface. The main window displays a Java application titled "Welcome to the MARS Enterprises". The application text is as follows:

```
<terminated> OÖ2016400198 [Java Application] C:\Program Files\Java\jre1.8.0_112\bin\javaw.exe (19 Kas 2017 14:57:49)
Welcome to the MARS Enterprises.
For the security of both of the sides, your informations are secured with MARS Security.
This program was designed to elect among individuals
who may become the possible employee of our company.
If you are ready, confirm that you are no robot by typing 1 and pressing enter.
1
Status: You are allowed to proceed.
To avoid a boring worklife and working environment,
MARS Enterprises is looking for some funny people with amazing background.
Are you worthy to become the next generation of JOKE?
Let's begin with the first question. What's the word which the people call you?
atahan tekcan.
Hello atahan tekcan.
Your parents should name you with a name starting with M.
What a shame! :(
Now, let's learn your age.
How many year passed since you were extracted from your mother's belly?
19
You have lived long enough without us.
Now live with us if you are worthy.
First step is completed.
Proceeding with second step now.
Here we are at the second step. That's an easy one, I guarantee you.
Tell me you sex: Male or Female?
male
Now, You are a man, I see. But are you a real man?
Have you completed your military service? Type "yes" or "no".
yes
You're amazing maan. I knew you are one of those superpowered patriots. Yehhhuu!
Okay then. Let's continue with the basis of this auto-interviewing program. The position...
Here we are, at the gate of your career. Tell me my possible fellow employee,
Which department are you making an application?
Type the number of the job you're applying for.
1 - Software Engineer
2 - Accountant
3 - Academic
2
Do you have an accounting degree? Type "yes" or "no".
yes
Great. Then, do you know how to use Excel very well? Type "yes" or "no".
yes
Wonderful. By the way let me ask you another questions.
First question is do you speak English fluently?
```



The screenshot shows the continuation of the Java application from the previous image. The text continues as follows:

```
First question is do you speak English fluently?
yes
And the second is do you have friends who can translate English for you?
Type "yes" or "no" for both.
yes
no
How many people do you know in MARS Enterprises?
5
Final question : Do you have a driving license? That's very important that you have one.
Type "yes" or "no". Last question btw. You can do it! :)
yes
OH MY GOD! The person we are looking for is you. You will be one of us if you choose to accept our conditions.
Thanks for so much effort and time. Waiting your final answer. :D
There is no problem for hiring you. But do you want to be a part of us?
Type "yes" or "no".
yes
You have passed all the questions. By the rules of MARS Enterprises, I hereby commission you under MARS Enterprises.
Welcome to outer space, my fellow colleague! Live the way you live!!!
```

5) Conclusion:

I've devised this program to solve this problem as mentioned above. By obeying the restrictions of the problem, I made that code and it works as requested.