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**Quiz Test Application**

**Student Details**

Name	ID
Tarekul Islam	191002300

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**Course Teacher's Name** : Md. Jahidul Islam

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# Chapter 1

## Introduction

### 1.1 Introduction

**Relevance:**

Quiz Contest/Test is a Linux application that has general questions related to current affairs and computer. It has multiple choice questions with time limit and it also calculate scores of each correct answer. It is good for students of every age group it helps in increasing general knowledge about world ,Sports and computer etc. Don't need register simply give any user name and Exam code. The application helps the user to increase his/her knowledge. Since Smartphone mobiles are being widely used by general population and students, the Quiz Contest application can provide on the Student's mobile in future.

**Problem Definition:**

Quiz test is a application developed to conduct an quiz based on time constraints. Quiz test system is accessed by entering the user name and exam code. Before start of the quiz, a dialogue window open that includes exam code and Examiner name. Quiz is started by displaying a set of question with four options each based on computer and general knowledge. if the answer is correct, 1 score is incremented by 0,5 and other by 1 . If the time exceeds 600secs then automatically application will finally direct you to the score page. Final score will be displayed with username.

### 1.2 Design Goals/Objective

The main objective of “Quiz Test Application” is to facilitate a user friendly environment for all users and reduces the manual effort. In past days quiz is conducted manually but in further resolution of the technology we are able to generate the score and pose the queries automatically. The functional requirements include to create users that are going to participate in the quiz, automatic score and report generation and administrative tasks like add, delete, update for admin privilege users. In this application, all the permissions lies with the administrator i.e., specifying the details of the quiz with checking result will show to interviewee or not, addition of question and answers, marks for each question, Set timer for quiz and generate report with score for quiz.

The purpose of the project is to build an application to reduce the manual work for managing the MCQ quiz and we will follow to achieve these objectives in this project.

- To create an appropriate platform for best managing of MCQ test;
- To overcome the time consuming issues and taking MCQ tests;
- To release the marks of the test taker as soon as possible;
- To manage the information of different tests

# Chapter 2

## Design/Development/Implementation of the Project

### 2.1 Methodology

The methodology of developing of project will be a step-by-step sequence to design, develop and deliver the application. In software engineering this methodology called 'waterfall model' which one portion of work follows after another in a linear sequence. Following steps will be followed in this methodology:

- Initiation (Requirement Specification);
- Planning and design;
- Execution (construction and coding);
- Validation (Testing);
- Closure (Installation and Maintenance).

#### 2.1.1 Requirement Specification

By project requirements specifications we can analyze the tasks which going to be done by the system. The function and performance of allocated to software as part of system engineering are refined by establishing a complete information description. A detailed functional and behavioral description of the project and concentrating on requirements and constraints of that will provide and good product.

#### 2.1.2 Project Design

For designing and implementing of this MCQ Quiz application we used Shell Script, Yad-display GTK+ dialogs . Following pages have been designed using yad.

##### Confirmation window:

This the first page which user observe after running the project. This page will able the user to give his name and Exam code to enter in exam.

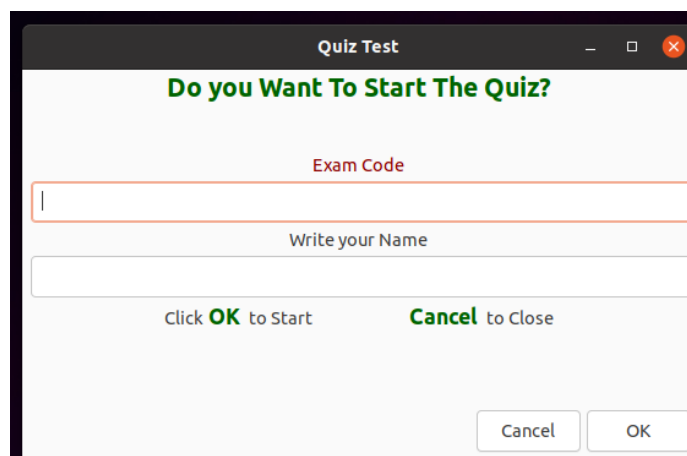


Figure 1: Confirmation page

### Question page:

After confirmation of the test by giving exam code and student name. student will see the question set and answering rules and regulations, time, total mark and a time count down bar at the left side. The Time count bar will decremented second by second. After timeout the window is automatically closed. If the student can't submit the answer.

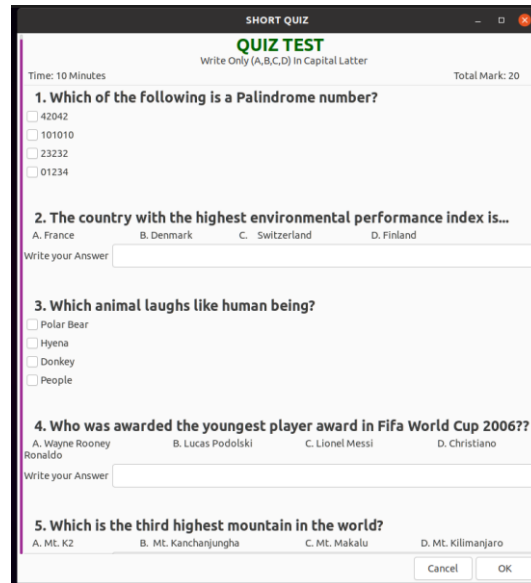


Figure 2: Question and Answering page

### Marks/result:

After submitting the answer form. This result window will show with total mark. Correct answer and wrong answer and a statement of fail or pass.

Figure 11: Result off All Test for Particular Student Which Have Taken

## 2.2 Coding

As mentioned before, project is on shell Scripting platform and it's a Linux based which is coded in gedit and Run in Linux Terminal. So coding exist for all following pages:

### 2.2.1 First Dialogue

```
d=0
e=0.5
id=$(yad --title="Quiz Test" --width=350 --text-align=center --separator=" " --
text="<span foreground='Dark Green'><b><big><big>Do you Want To Start The
Quiz?</big></big></b></span>" \
--field="
":LBL \
--form \
--field="<span foreground='Dark Red'>Exam Code</span>":LBL --align=center \
--field=" " \
--field="Write your Name":LBL \
--field=" " \
--field="Click<span foreground='Dark Green'><b><big><big> OK </b></big></span> to Start
<span foreground='Dark Green'><b><big><big> Cancel </b></big></span> to Close":LBL --
align=center \
)
```

### 2.2.2 Question Set

```

x=${id:0:1}

if [ $x -eq 1 ]
then
    a=$(yad --title="SHORT QUIZ" --text-align=center --width=755 --height=800 --
--timeout=600 --timeout-indicator=left --separator="" --text="<span
foreground='Dark Green'><b><big><big><big>QUIZ
TEST</big></big></big></b></span>
    Write Only (A,B,C,D) In Capital Latter" \
--form --scroll \
--field="    Time: 10 Minutes
Total Mark: 20":LBL \
--field="":LBL \
--field="<b><big><big>    1. Which of the following is a Palindrome
number?</big></big></b>":LBL \
--field="42042":CHK \
--field="101010":CHK \
--field="23232":CHK \
--field="01234":CHK \
--field="
":LBL \
--field="<b><big><big>    2. The country with the highest environmental
performance index is...</big></big></b>":LBL \
--field="    A. France                                B. Denmark
    C. Switzerland                                D. Finland":LBL \
--field="Write your Answer: " \
--field="
":LBL \
--field="<b><big><big>    3. Which animal laughs like human
being?</big></big></b>":LBL \
--field="Polar Bear":CHK \
--field="Hyena":CHK \
--field="Donkey":CHK \
--field="People":CHK \
--field="
":LBL \
--field="<b><big><big>    4. Who was awarded the youngest player award in Fifa
World Cup 2006??</big></big></b>":LBL \
--field="    A. Wayne Rooney                                B. Lucas
Podolski                                C. Lionel Messi                                D.
Christiano Ronaldo":LBL \
--field="Write your Answer: " \
--field="
":LBL \
--field="<b><big><big>    5. Which is the third highest mountain in the
world?</big></big></b>":LBL \
--field="    A. Mt. K2                                B. Mt.
Kanchanjungha                                C. Mt. Makalu                                D. Mt.
Kilimanjaro":LBL \
--field="Write your Answer: " \
--field="
":LBL \
--field="<b><big><big>    6. What is the group of frogs known
as?</big></big></b>":LBL \
--field="    A. A traffic                                B. A
toddler                                C. A police                                D. An
Army":LBL \
--field="Write your Answer: " \
--field="

```

```

":LBL \
--field="<b><big><big> 7. What is the National Game of
England?</big></big></b>":LBL \
--field=" A. Football B.
Basketball C. Cricket D.
Baseball":LBL \
--field="Write your Answer: " \
--field="
":LBL \
--field="<b><big><big> 8. Study of Earthquake is
called.....</big></big></b>":LBL \
--field=" A. Seismology . B.
Cosmology C. Orology D.
Etymology":LBL \
--field="Write your Answer: " \
--field="
":LBL \
--field="<b><big><big> 9. Among the top 10 highest peaks in the world, how
many lie in Nepal?</big></big></b>":LBL \
--field=" A. 6 B. 7 C.
8 D. 9":LBL \
--field="Write your Answer: " \
--field="
":LBL \
--field="<b><big><big> 10. The Laws of Electromagnetic Induction were given
by?</big></big></b>":LBL \
--field=" A. Faraday B.
Tesla C. Maxwell D. Coulomb":LBL
\
--field="Write your Answer: " \
--field="
":LBL \
--field=" Click<span foreground='Dark Green'><big><b> OK
</b></big></span> to Submit

<span foreground='Dark Green'><big><b> Cancel </b></big></span> to Close":LBL\
)
fi

```

### 2.2.3 Result Screen

```

if [ "${a:10:4}" == "TRUE" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:19:1}" == "C" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:25:4}" == "TRUE" ]
then
    d=`echo $d+$e | bc`
fi
if [ "${a:34:4}" == "TRUE" ]
then
    d=`echo $d+$e | bc`
fi
if [ "${a:38:1}" == "B" ]

```

```

then
    d=`echo $d+1 | bc`
fi
if [ "${a:39:1}" == "B" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:40:1}" == "D" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:41:1}" == "C" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:42:1}" == "A" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:43:1}" == "C" ]
then
    d=`echo $d+1 | bc`
fi
if [ "${a:44:1}" == "A" ]
then
    d=`echo $d+1 | bc`
fi

name=${id:1}
tot=10
sc=${d%.*}
res=`expr $tot - $sc`
if [ $sc -ge 6 ]
then
    yad --title="Result" --text-align=center --width=400 --text="<span
foreground='Green'><big><big><b>
    Congratulations!  </b></big></big></span>
    $name
    You are Passed!" \
--form \
--field="          Your Score: $d":LBL \
--field="          Right Answer: $sc":LBL \
--field="          Wrong Answer: $res":LBL \
elif [ $sc -lt 6 ] && [ $sc -gt 0 ]
then
    yad --title="Result" --text-align=center --width=500 --text="<span
foreground='Green'><big><big><b>
    Sorry!  </b></big></big></span>
    $name
    You are Failed!" \
--form \
--field="          Your Score: $d":LBL \
--field="          Right Answer: $sc":LBL \
--field="          Wrong Answer: $res":LBL \
else
    echo "Canceled!"
fi

```



# Chapter 3

## Performance Evaluation

### 3.1 Simulation Environment/ Simulation Procedure

Though this is a Linux Operating system based project and it can only run on Linux Terminal. You can use any version of Linux Like Ubuntu, Kali, Mint, Garuda, Fedora etc. then we need to install yad dialogue GTK+ by following command.

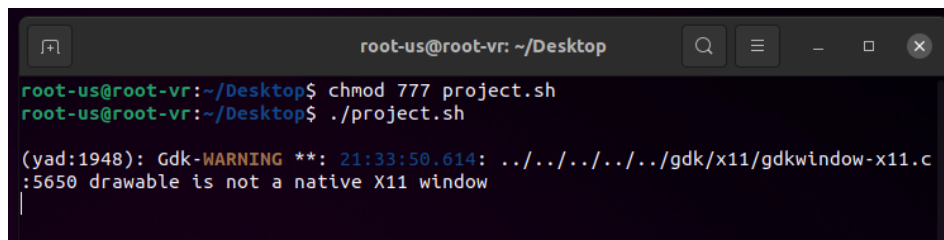
- `sudo apt-get update -y`
- `sudo apt-get install -y yad`

After installing you can run the Application by using Linux terminal. For run you need to write the following command in Terminal.

First Give the file execute permission by using: `chmod 777 filename.sh`

Here 777 means. The root user give the permission of read, write, execute.

After giving permission you can write the run command by follow: `./filename.sh`



```
root-us@root-vr: ~/Desktop
root-us@root-vr:~/Desktop$ chmod 777 project.sh
root-us@root-vr:~/Desktop$ ./project.sh

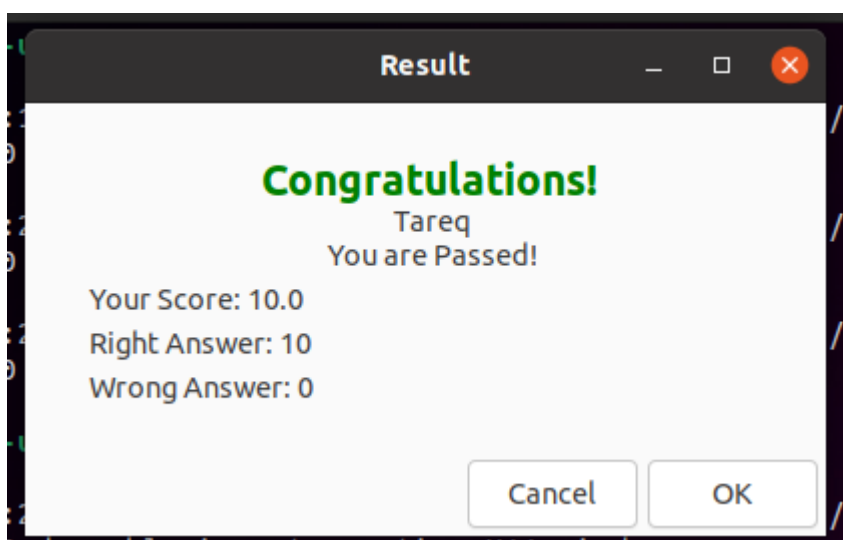
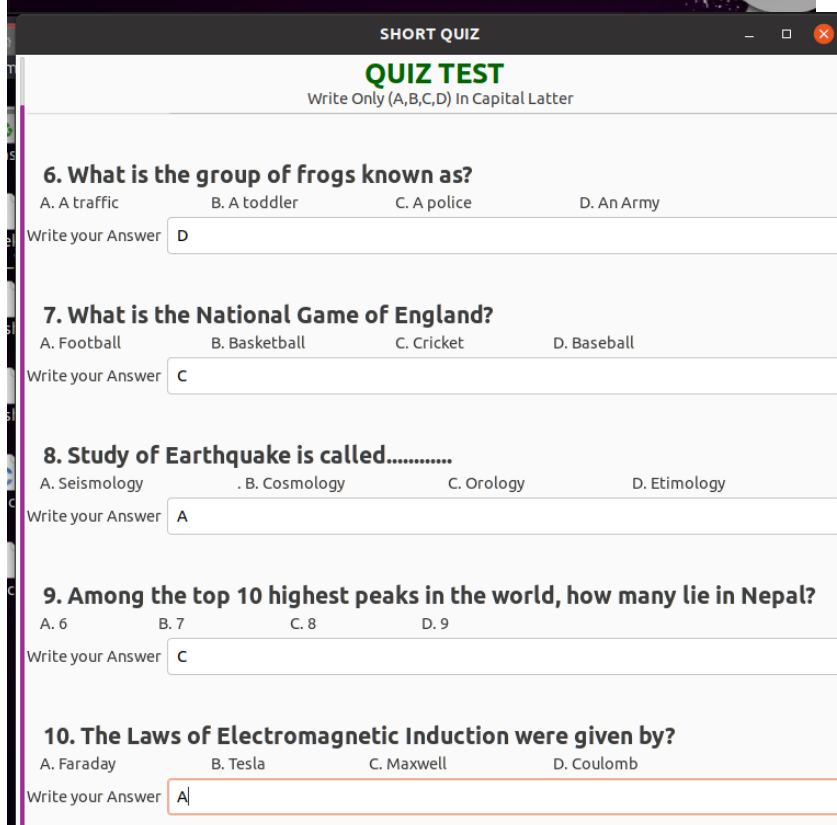
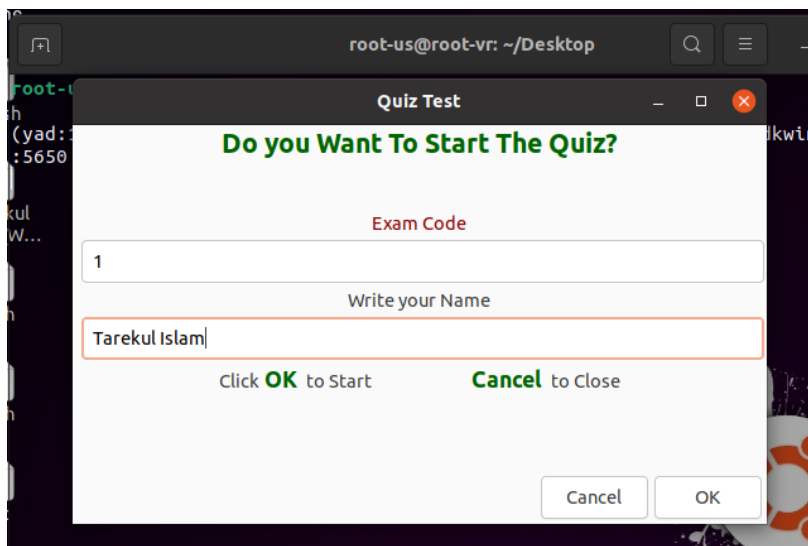
(yad:1948): Gdk-WARNING **: 21:33:50.614: ../../../../gdk/x11/gdkwindow-x11.c:5650:drawable is not a native X11 window
```

Figure 4: Giving Permission and Run the project.

### 3.2 Results and Discussions

#### 3.2.1 Results/Testing

We can successfully Run our application and it will working properly. Some screenshot of our Application is given below:



### 3.2.2 Analysis and Outcome

The feasibility study is an evaluation and analysis of the potential of a proposed project which is based on extensive investigation and research to support the process of decision making. Depending on the results of the initial investigation the survey is now expanded to a more detailed feasibility study.

#### Software Requirements:

Operating System: Linux

Toolkit: YAD-GTK+ 3.0 or above

Platform: Linux and Android

#### Hardware Requirements:

Processor: Intel Pentium or Above/Amd FX or Above

Ram: Minimum 4 GB

OS: Any Version of Linux

## Chapter 4 Conclusion

### 4.1 Introduction

This Quiz application provides facility to play quiz anywhere and anytime. It save time since user does need to wait for result. So student/user cannot wait for the result. All Student/ user get extra knowledge and skills. Administrator has a privilege to put as much as question in any category given in application. User can register, log-in, and give the test with his/her specific id, and can see the results as well in our future work.

### 4.1 Practical Implications

We will implement these application for android soon. So that our app, users can learn and prepare themselves for interviews, tests and exams on Android phones, and can also use this app for increasing their general knowledge about Computer Science, Verbal and Analytical, everywhere and anytime.

### 4.2 Scope of Future Work

As mentioned the project is on Linux platform which is coded in GNOME text editor Shell Script and YAD GTK+ deluge. But this project is only for MCQ test but in the future we have plan to extended it to support subjective type of questions with more functionality. We will add Administrative part on it which able the system to delete test, add user, delete user and so on graphically vie the web.

## References

- [1] <http://smokey01.com/yad/>
- [2] <http://manpages.ubuntu.com/manpages/xenial/man1/yad.1.html>
- [3] <https://unix.stackexchange.com/>
- [4] <https://www.geeksforgeeks.org/>