



ATMIYA UNIVERSITY

(Established under the Gujarat Private University Act 11, 2018)

Yogidham Gurukul, Kalawad Road, Rajkot - 360005, Gujarat (INDIA)

Project Report

On

“rock paper scissor Game”

Under subject of

MAJOR PROJECT

B.Tech, Semester – VIII

(Department of Information Technology)

Submitted by:

Jayraj Dhakan

190004008

Prof. Piyush Kashiyan

(Faculty Guide)

Prof. Darshan Jani

(Head of the Department)

Academic Year

(2022-23)



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CANDIDATE'S DECLARATION

We hereby declare that the work presented in this project entitled “**rock paper scissor Game**” submitted towards completion of project in 8th **Semester** of B. Tech. (Information Technology) is an authentic record of our original work carried out under the guidance of “**Prof. Piyush Kashiyan**”.

We have not submitted the matter embodied in this project for the award of any other degree.

Semester: 8th

Place: Atmiya University, Rajkot

Signature:

Jayraj Dhakan (190004008)



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CERTIFICATE

Date:

This is to certify that the “**rock paper scissor Game**” has been carried out by **Jayraj Dhakan** under my guidance in fulfillment of the subject Major Project in Information Technology (8th Semester) of Atmiya University, Rajkot during the academic year 2022-23.

Prof. **Piyush Kashiyan**

(**Project Guide**)

Prof. Darshan Jani

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ACKNOWLEDGEMENT

We have taken many efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. We would like to extend our sincere thanks to all of them.

We are highly indebted to **Prof. Piyush Kashiyan** for their guidance and constant supervision as well as for providing necessary information regarding the Major Project titled “**rock paper scissors Game**”. We would like to express our gratitude towards staff members of Information Technology Department, Atmiya University for their kind co- operation and encouragement which helped us in completion of this project.

We even thank and appreciate to our colleague in developing the project and people who have willingly helped us out with their abilities.

Jayraj Dhakan (190004008)

Rock paper scissors Game

Overview

Objective

A player who decides to play rock will beat another player who has chosen scissors ("rock crushes scissors" or "breaks scissors" or sometimes "blunts scissors"), but will lose to one who has played paper ("paper covers rock"); a play of paper will lose to a play of scissors ("scissors cuts paper").

History

The earliest form of "rock paper scissors"-style game originated in China and was subsequently imported into Japan, where it reached its modern standardized form, before being spread throughout the world in the early 20th century. A simultaneous, zero-sum game, it has three possible outcomes: a draw, a win or a loss.



ROCK



SCISSORS



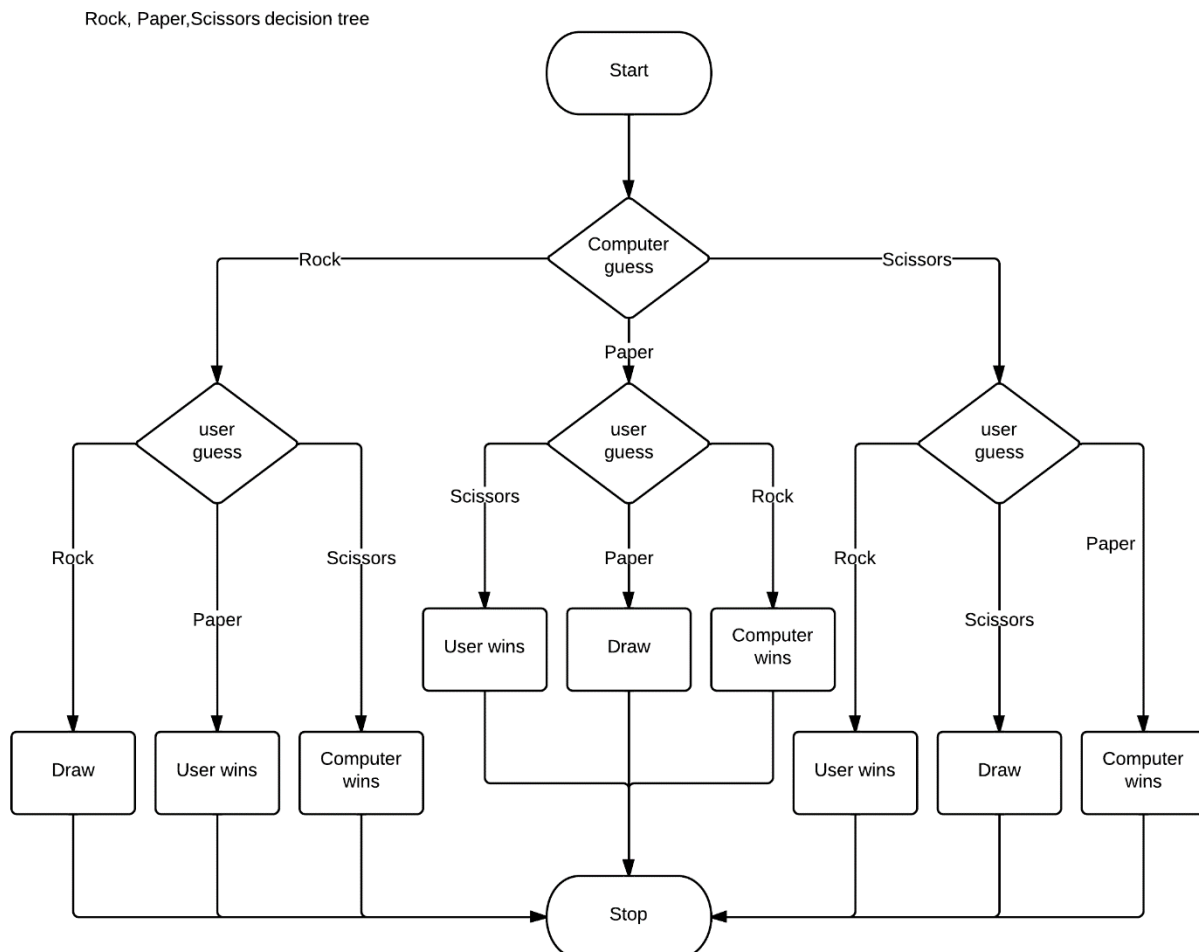
PAPER

Project Stages

The product Architecture can be divided into 5 stages as follows:

1. Create a python using Command Line App.
2. Design the project structure.
3. Once the project is set, design the window terminal frame.
4. Design the entire background by setting the dimensions, color, focus and object count.
5. Implement the actions of the keys and the objects.

Flow chart :

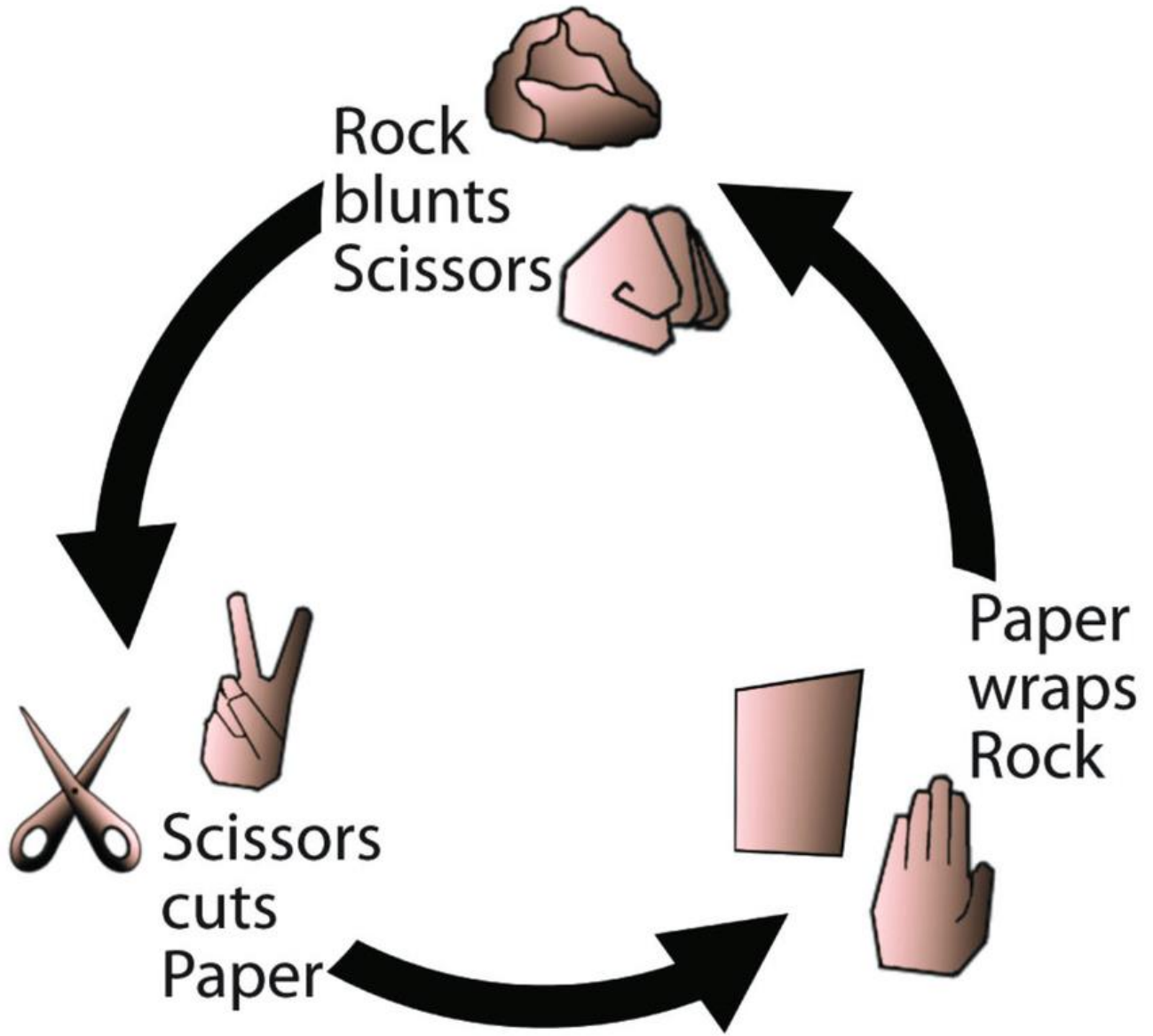


High-Level Approach

1. Design the window where the game needs to be framed.
2. Design the entire gameplay (rock, paper, scissors).
3. Implement the actions performed by the rock, paper, scissors

Primary goals

The objective is to defeat the opponent by selecting a weapon which defeats their choice under the following rules: Rock smashes (or breaks or blunts) Scissors (rock wins) Scissors cut Paper (scissors win) Paper covers Rock (paper wins)



Task 1

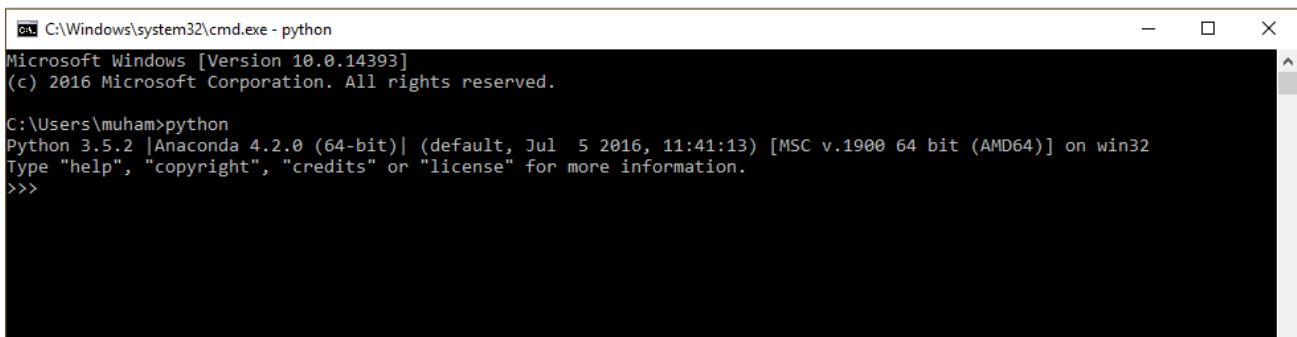
Setting up the development environment

First you need to set up the development environment for the python GUI project. For this, you need to install python . Additionally you need a code-editor or IDE to write the code.

Requirements

1. Install python
2. Install any IDE- IntelliJ (Community edition) or Eclipse or VS Code
3. Do the environment setup for python on your local machine
4. Create a python project
5. Provide the project name and the base package

Check the version of python to know whether you have successfully installed it or not-



```
C:\Windows\system32\cmd.exe - python
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\muham>python
Python 3.5.2 [Anaconda 4.2.0 (64-bit)] (default, Jul  5 2016, 11:41:13) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

Congratulations!!! Your initial set up is done!

Expected Outcome

You should be able to set up the initial development environment required to develop the game.

Task 2

Design the Game terminal

Game terminal is the window where the game is to be played. It consists of the following aspects: - Window size (length, breadth and height) - Window visibility - Game title - Default close operation

Requirements

1. Create a Main class inside the base package
2. Import tkinter and random library
3. Create an object to implement the GUI functionality
4. Design the window terminal by writing your code

Congratulations!!! You have successfully designed the game terminal!

Task 3

Design the gameplay

Game design sits under the broader field of game development and refers to the use of creativity and design to develop a game for entertainment or educational purposes. Game design can be characterized by "what the player does" and "what the player experiences". This is often referred to as gameplay.

Gameplay design is responsible for the central part of the game experience – how it plays. It plans and defines the game's structure, its rules, characters, objects, props and thinks about different modes of play.

Requirements

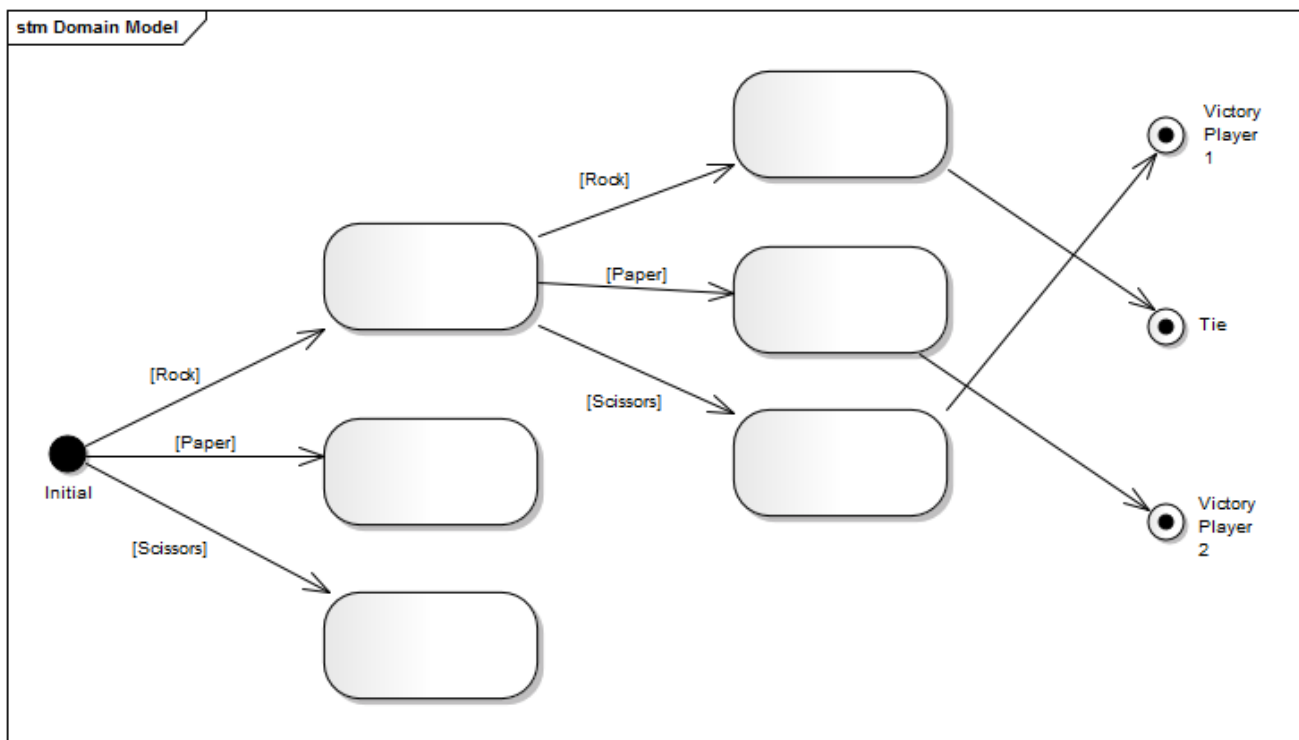
1. Create a Gameplay class inside the base package
2. Import tkinter and random library
3. Design the background template
4. Implement the code rock, paper, scissor
5. Implement the code for score system

Congratulations!!! You have successfully designed the gameplay!

Expected Outcome

You should be able to view the gameplay in the terminal.

Use case diagram :



Task 4

GUI Implementation Steps (Add Button, Label, Frame)

- **Create a head label that will show the title of the game, set its font and properties**
- **Below the head, label create a user label that will show the hand sign selected by the user**
- **Create a computer label that will show hand sign picked by the computer**
- **In between the user and the computer label create a label to show the text “vs”**
- **Create a result label to show the result set font and other properties to it**
- **Create three pushbuttons for rock, paper, and scissor respectively**
- **Create a reset button to reset the game.**

1. Import tkinter and random library
2. Download images of rock, paper and scissor
3. Implement the code for game working
4. Implement the code for calculating the score

Congratulations!!! You have successfully designed the entire game!

Task 5

Run the game in the terminal

Wrap up the code of the game and start it off right away using the terminal directly.

Requirements

1. Build the project
2. Import any dependencies, if left
3. Run the Main() class
4. Play the game in the terminal