ROCK,PAPER,SCISSOR GAME

SHIRISH KADIAN
2/12/2025

Submitted To –
Mr. Mohsin Sir

Project Report: Rock–Paper–Scissors Game in C LANGUAGE

1.Introduction

This project implements the classic game Rock–Paper–Scissors using the C programming language. The objective of the project is to demonstrate fundamental programming concepts such as conditional statements, loops, functions, user input handling, and the use of a random number generator. The game allows a user to play against the computer, which selects its choice randomly.

2. Objectives

- To develop a simple, interactive console-based game using C.
- To apply key programming concepts such as variables, conditional statements, loops, functions, and randomness.
- To gain practical experience in structuring small C programs.

3 Methodology

1. Display instructions to the user.
2. Accept user choice: 0 = Rock, 1 = Paper, 2 = Scissors.
3. Generate the computer's choice using rand() % 3.
4. Compare choices using conditional logic.
5. Display the result.
6. Ask the user if they wish to play again.
7. Repeat or exit accordingly.

4. Program Structure

The program consists of:
- Header files (stdio.h, stdlib.h, time.h)
- Conditional logic for winner determination
- Random number generation

5.FLOWCHART

```
        ┌─────────┐
        │  Start  │
        └────┬────┘
             │
             ▼
   ┌───────────────────────┐
   │ Display "Rock, Paper, │
   │   Scissors Game!"     │
   └───────────┬───────────┘
               │
               ▼
   ┌───────────────────────┐
   │ Display "0 = Rock.    │
   │ 1 = Paper, 2 = Scissors"│
   └───────────┬───────────┘
               │
               ▼
   ┌───────────────────────┐
   │   Get player choice   │
   └───────────┬───────────┘
               │
               ▼
        ◇ Is choice ◇
   Yes ◇ out of range? ◇ No
```

- Start
- Display "Rock, Paper, Scissors Game!"
- Display "0 = Rock. 1 = Paper, 2 = Scissors"
- Get player choice
- Is choice out of range?
  - Yes → Display "Invalid choice! Please enter 0, 1, or 2."
  - No → Generate computer choice
- Is it a draw?
  - No → Display "You win!"
  - Yes → Does player win?
    - No → End
- End