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# Project Application Idea:

## Introduction:

When most people picture a casino, they will probably imagine one of the megaresorts in [Las Vegas](https://www.encyclopedia.com/places/united-states-and-canada/us-political-geography/las-vegas)—a massive hotel and entertainment complex, blazing with neon lights, games, and fun—however, casinos come in all sizes. Some casinos are huge, whereas others are small businesses defined more by the types of gambling they offer than by glitz and glamour.

For practical purposes, casino gambling encompasses games of chance and skill played at tables and machines. Therefore, casino games take place in massive resorts as well as in small card rooms. There are also floating casinos operating on boats and barges on waterways across the country. Casino game machines have been introduced at racetracks to create racinos. In some states, casino-type game machines are also allowed in truck stops, bars, grocery stores, and other small businesses.

Casino games typically provide a predictable long-term advantage to the casino, or "house", while offering the players the possibility of a short-term gain that in some cases can be large.

## Problem Statement:

Since casino games don’t typically provide a purpose in our day to day lives, so the goal of this project is just to create a small fun game to enjoy with your friends, family or in general anyone for the purpose of entertainment in your free time.

Maybe even place some bets ಡ⁠ ͜⁠ ⁠ʖ⁠ ⁠ಡ

## Objective:

Our project's goal is a simple one, to create a user friendly casino styled betting game which provides the means for users to play for fun or even place serious bets.

Our objectives in this program are:

* Creating a user friendly interface
* Creating a fair system to generate random dice numbers.
* Keeping track of the users balance.
* Allowing user to continue playing or call it quits.

## Scope:

* Users information is gathered by collecting his/her name and balance.
* Bets are placed according to the users will whilst keeping his/her balance in mind
* On a physical machine, users may find ways to beat the system by cheating
* Physical machines don’t keep track of the users balance or his bets and in case of board games on a large scale a person is required to keep in check all the users details.

## Background:

System analysis is the breakdown of a substance into components for research, implementation, and thorough evaluation. It's vital to comprehend the nature of the organisation and how it currently functions before developing any systems. The thorough analysis provides the precise data required throughout the design phase to guarantee that all client needs are met. The investigation or study carried out during the analysis phase is built on the feasibility study. The phases of analysis and feasibility are linked, and this is not erroneous. The feasibility study is where high-level analysis starts. Contrary to popular belief, the system development life cycle (SDLC) does not include analysis as a phase. The system's setup and maintenance are the starting points for the analysis. Even after the system has been installed successfully, analysis may be utilised to regularly maintain and enhance the system. Lack of understanding of the requirements is one of the most frequent reasons for project failure, and inadequate system analysis planning is one of the most frequent reasons for a lack of understanding of the requirements.

# Requirement Specification:

## Introduction:

Each and every computer application needs specific hardware parts or other software resources to run effectively. System requirements are the name given to these needs.

## Hardware Requirements:

Physical computer resources, commonly known as hardware, are the most frequent set of requirements given by any operating system or software program. A hardware compatibility list (HCL) is frequently included with a hardware requirements list, especially in the case of operating systems. For a certain operating system or application, an HCL lists tested, compatible, and sometimes incompatible hardware devices. The sub-sections that follow go over the various features of hardware requirements.

Hardware Requirements for Present Project:

**Processor:** Intel Core i5 to Intel Core i9 8th generation used as a processor because it provides reliable and

stable working and run our pc for long time.

**Ram:** Ram 4 GB up to 32 GB is used, as it will provide fast calculations and performance.

**Hard Disk:** Hard disk from 4 GB up to 2 TB is used.

Software Requirements for Present Project:

**Operating System:**  Window 7, 10 or 11 is used as OS as it is stable and supports more features.

**Development Tools:** C++ support Visual Studio provided by Microsoft is used as it provides stable working.

# Project Management:

## Project planning and scheduling:

In order to plan and monitor progress within a project, project planning, a subset of project management, uses timetables like Gantt charts (Template). Priority is given to defining the project's scope, then the ideal method for completing it. This is followed by a work breakdown structure that lists and organises the durations for each task that must be completed. The logical relationships between tasks are defined using an activity network diagram, which enables the critical path to be found.

## Project Plan:

The Table below describe how we planned our project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Task Name | Duration | Start | Finish |
| 1 | Planning | 3 days | 19th Dec,22 | 23rd Dec, 22 |
| 2 | Documentation | 2 days | 23rd Dec,22 | 25th Dec, 22 |
| 3 | Delivery |  |  | 30th Dec, 22 |

## Schedule Representation:

One crucial step in project planning is task scheduling. Choosing which chores and when to complete them is required.

|  |  |  |  |
| --- | --- | --- | --- |
| Week | 1 | 2 | 3 |
| Planning |  |  |  |
| Design |  |  |  |
| Coding |  |  |  |
| Testing |  |  |  |
| Delivery |  |  |  |

# System Design:

## Introduction:

Finding a solution to the issue specified by the requirements is the aim of the design phase.

Determine which modules should be included in the system, their specifications, and how they interact to produce the intended outputs are the objectives of system design. The goal of the design process is to provide a model that can be used to construct the system afterwards. The term "system design" refers to the model that is produced.

System design is the process of determining the parts, modules, interfaces, and data for a system in order to satisfy particular requirements.

## Physical Design:

The internal and external components of a system, as well as the data flow into and out of these components, are all graphically represented in the physical architecture of the system. An internal entity is a system component that transforms data.

To represent the physical design of the system, we utilize diagrams like data flow diagrams and use case diagrams.

## Diagram of A Casino Game:

**Balance**

# Team:

## Team Members:

* Faizan Qadir
* Syed Rayyan Hussain
* Roshaan Zaffar

## Responsibilities:

1. **Faizan Qadir**

* Make the functions required for the program.
* Make loop logics.

1. **Syed Rayyan Hussain**

* Give Project Idea
* Gather information about Scope and Requirement Specification.
* Reduce the size of the code.
* Error testing.

1. **Roshaan Zaffar**

* Make the main function whilst making use of the functions his partner made.
* Create Semester Project Document.

# Functional Requirements:

There are not a lot of software requirements specifications included in the functional requirements of the Casino Game System, which contains process like Registering their names, getting users balance, how much he/she wants to bet, guessing the number and finally showing the players new balance and giving him the option to play again.

## Registration Process:

* Getting users name and balance.

## Betting:

* Asking the user how much he wants to bet.

## Rolling the Dice:

* After gathering all the data, the program will roll the dice and generate a random number.
* The user has to guess the correct the number to win the bet or he loses all his money.

## New Balance:

* After the dice has been rolled the user either loses or wins, there’s no in between.
* The program will then proceed to show the user’s new balance.

## User’s Freedom:

* The User is given the option to end the game whenever he feels like it, however if he/she has deposited his betting money then he/she must play through it.
* Afterwards he/she is given the option to end the game or continue playing.

# Conclusion:

Since we are making an offline game just for the purpose of entertainment there are no risks of actually losing your money and u can play it in the comfort of your home and have some fun with it as a little side game with your friends or in general anyone.

Since there is no real money involved another advantage of this program is that we can teach the younger generation just how fast they can lose everything if they get into the bad habit of gambling.