**Program design document**

**3D CINEMA**

Developer team:

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# Introduction

## Document Purpose

<Identify the purpose of this document, its content, intended audience.>

The purpose of the program is to give the overall idea of the functions this program provides. From name of variables, including their data type and purpose, to algorithms inside the program to do specific tasks. We explain the structure of the program in a simplest way and give visual representation to be followed by the description of all variables and ending with flowcharts explaining algorithms done in the program.

## Definitions, Acronyms and Abbreviations

<List all concepts used in this document that are unknown to intended audience.>

We didn’t use any advanced concepts while the making of this document, so it is safe to say that all the information provided is user friendly.

Abbrevations:

gName=get name

gMovie=get movie

gSeats=get seats

## References

<List all other documents that are referred to in this document.>

We didn’t use any external resources, except our knowledge and presentations provided by the professor.

# Program overall description

<Define the goal of the program and describe its main functions.>

The purpose or this program is to create an easy graphical user interface for booking a movie ticket. There are many stages during this program. First, we start in the main menu, where our customer received with a warm welcome, and is asked for his name. After that a list of movies is show to him and asked to select a movie of his choice. Selecting a movie leads to choose how many seats the customer wants, and finally leads to laying out the booked movie and the total amount to pay. This program is intended to be used by customers that attend the 3D CINEMA since it is going to be a system in the facility rather it being a online system.

# Program architecture

## Architecture design

<Present the main program components or modules and define relationships between them using an organizational chart.>

START

ASK FOR NAME

ASK TO SELECT THE MOVIE

ASK HOW MANY SEATS THE USER WANTS

CALCULATE THE PRICE TO PAY BY USER

PAY AND RETURN TO START

# Data dictionary

<List and describe all data instances consumed or produced by the program (input/output data).>

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Description** | **Type** | **Range of values** | **Length** |
| gName | Get name | String | output | - |
| name | Where name is saved | String | output | - |
| scan | Scanner for input | Scanner | - | - |
| number | Choosing number for movie | integer | [1..3] | - |
| seats | Where number of seats is saved | integer | [1..4] | - |
| price | Know price for each movie | double | [2..25] | - |
| pay | Sum of all number of tickets for movie | double | [2..25] | - |
|  |  |  |  |  |

# Program algorithms

<Describe at least 2 algorithms).>

## Program algorithm A

<Describe the functionality of component and prove its necessity (why this component is needed).>

Selecting a movie from the list is one of the most essential functions in the program. When we create the object gMovie, we added the list of movies to it. we create a loop that goes with the length of movie list and check which movie is selected from the Movie List.

### Functions of component A

<List all functions that are included in this component, describe the relationships between this functions using a flowchart.>

START

SELECT A MOVIE FROM THE LIST

3

5

2

1

4

PRICE OF THE MOVIE

PRICE OF THE MOVIE

PRICE OF THE MOVIE

PRICE OF THE MOVIE

PRICE OF THE MOVIE

## Program algorithm B

<Describe the functionality of component and prove its necessity (why this component is needed).>

This function is used at the end of the program and it is used to calculate the total amount to pay according to the order the customer made. We asked the customer the number of seats he/she wants and then multiply that number with price of the movie and ask the customer to pay the price.

### Functions of component B

<List all functions that are included in this component, describe the relationships between this functions using a flowchart.>

RETURN TO MAIN START

CALCULATING THE PRICE TO PAY BY THE CUSTOMER

ASK NUMBER OF SEATS

START