**A REPORT ON THE CHOICE OF LANGUAGE CHOSEN FOR DESIGNING A THEATRE TICKET MACHINE.**

Given the above problem, we chose to use the c programming language mainly because of the following reasons.

1. **The suitability of the language for the problem domain: -** the above problem involves a program to help in management of Cinemax theater so as to assign and book seats, and sell tickets for performances. This makes the problem to fall in the business application domain that requires a lot of computation therefore c programming language will provide all the required constructs for such computations.
2. **Readability of the language**: - C programming language provides ways of combining several primitive constructs so as to create larger constructs for example one can combine several data types so as to create a function that can be called throughout the whole programme hence high level of orthogonality. This makes reading easy.

1. **Reliability of the language:** - C programming language is a strongly typed languages and this means that type errors are always checked and this makes the language very reliable.
2. **Cost of the language:** - C programming language is one of the easiest languages to learn and will cut on the cost of training programmers. The cost of execution is also low since there are no many libraries that are required for c to run.
3. **Portability of the language:** - it is easy to move a c programme from one implementation to another.

The following are the steps that we went through to create the above system: -

1. **Analysis of the problem: -** This involved a careful study of the problem. It was after this kind of study that we were able to understand what kind problem domain this was. The problem being a business domain problem we chose to use C programming language. After this we analyzed what the new system is required to perform and what kind of data input is required for the system and what the system outputs later.

**Data input.**

1. **Prices: -** this includes the prices of each seat in the theatre.
2. **Seat type:** -this indicates the category of the seat according to the rows in the cinema.
3. **Number of seats:** - this is the number of seats that one customer would like to buy.
4. **Selection of the kind of kind of seat.** This includes inputting the position of seat number and row in which it is position.
5. **Seat status: -**  this indicates what state of the seat whether it is booked, available or reserved.

**Data output.**

1. **The seat arrangements: -** this involves displaying a chart showing all the seats and their status.
2. **The number of available seats:** - this is the total number of seats that are available.
3. **Total revenue from the seats sold:** - this is the

**2.implentation of the problem.**

**3. Testing the code**