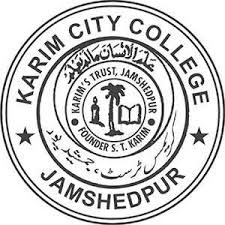
**Department of Computer Application**

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Project Topic :- **Construction Management System**

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**INTRODUCTION**

Construction project management is the the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, quality, and participating objectives. Wherein a construction project manager uses the model to achieve the same goal, only in a construction context.

At its most fundamental level, construction project management handles the planning, coordination, and execution of a construction project, whether it’s agricultural, residential, commercial, institutional, industrial, civil or environmental.

Construction project management typically includes complicated tasks that can shift wildly, depending on the work at hand, and it requires strong skills in communication, deep knowledge of the building process, and the ability to problem-solve. Construction project management is a complex field, requiring knowledge in many different areas like finance, law, business, and more.

Successful projects depend on every project team and every project member doing their job to a high standard, as well as flexibility and a commitment to good cross-team communication. If you love being part of a team and working with people to create something unique, project management could well be the path for you.

Project managers need to be real outside-the-box thinkers who have a dynamic approach to problem-solving.

Construction project managers shoulder the responsibility of keeping the project moving according to plan. The goal is to manage the project so that it finishes on schedule and within budget, while still meeting building codes, plans, and specs.

This project system includes Flat construction details, Duplex construction deatils, Customer dealing, Staff maintainance, and various types of daily and monthly reports.

**Objectives**

Objectives of taking Construction Management System are as follows:

1. This project is picked up due to the fast growing industry and the demand for the system in future.
2. The way the organizations are running requires standardization.
3. Huge scope in implementation.
4. Optimum utilisation of human, resources, materials, finance and time resources for Economical.
5. An organization for execution of the plan, organization structure will depend on types of workand time schedule.
6. Planning of each activity
7. Planning for Construction Equipments and Machinery
8. Procurement of materials
9. Planning for employee skills
10. Planning for required documents and drawings
11. This project is also picked up for the purpose of B.Sc.(IT) project but this system can be a first step in the development field.

**Drawbacks of Existing system**

1. It is very difficult and time consuming to maintain all the details in to the registers when the organization is very big.
2. Modifying the records is not very easy, since for a minute change the whole record would be required to re-entered. For instance, if , the address of any customer changes then locating that customer and doing modification in registers is very tedious.
3. It also take much time for doing entry and checking of records.
4. There is also possibility of mismatching of entries during entry of records.
5. To make and maintain the different reports is also very tough and tedious job.
6. Information is stored into registers, which requires large storage space.
7. Searching particular record is very tedious job, since as a time passes the condition of the registers becomes bad.
8. Every year, they have to maintain new registers.

**Advantages of the proposed system**

1. provide  information  in  a  quick  time  according  to  the  requirements  that  are  to  be Fulfilled.
2. Easier  retrieval  will  be  possible  as  multiple  search  facilities  will  be  available.
3. Security of data.
4. The important process is integrated together for a proper functioning.
5. Redundancy of data is removed.
6. Inconsistency of data is removed.
7. The Paper Work would be reduced to a greater extent

**Hardware and software Requirements**

**Hardware:-**

RAM: 2 GB or above

Hard disk: 500 GB or above

Printer: Laser printer for good output printing.

Monitor: 18’ INCH

Processor: I3 OR ABOVE

**Software:-**

**Operating system:**

**Windows XP, 7 or above**

**Front end**

**JAVA**

**Back End:**

**ORACLE 10g /MySQL /MS ACCESS**

**Module Description**

* + **Flat Entry:** It is also a master record and it is used to maintain all the status of the flat i.e. which one is booked and which is pending.
  + **Duplex Entry:** It is also a master record and it is used to maintain all the status of the Duplex i.e. which one is booked and which is pending.
  + **Customer Entry:** This is a master form and whenever a customer comes for booking of a particular duplex/flats his/her records are kept. This may be beneficial for the organization in future.
  + **staff Entry:** This module is also for master handling. An construction management company keeps the details of the decorators so that whenever required they can be contacted and the customer can also be given information about them.
  + **Follow-up:** A person who comes for enquiry is a potential customer and hence should not be overlooked. So follow up must be done and recorded.
  + **Booking:** Construction management is a tough task and requires lots of preparation. Hence it requires time. This module is used for keeping all the booking records. This module is for transactional purpose and is very critical. While developing special care should be taken as all the activities depend on this module.
  + **Enquiry:** This software is for the service industry hence lots of enquiries are done.
  + **Payment:** This module is used for keeping and monitoring the payments being made. The payments are made in installments and proper monitoring should be done.
  + **Booking Cancelation:** This is also of transactional level. It monitors the cancelation being done by the customer.

**Reports involved in the systems**

* **Availability Report:** This report is used to show the availability status of flats and buildings. This report is helpful for the management so that the clashes of the flats or duplex are avoided and the targets are met in time.
* **Daily Report:** This report is used to show the all the bookings done on the specific date. This report is helpful for the management when they want all deatils of specific date in a single place.
* **Monthly Report:** This report is used to show the all the payments done on the specific month. This report is helpful for the management when they want all deatils of specific month in a single place.
* **Receipts:** All the payments are acknowledged and the records of the payment kept.

**Databases to be expected in the proposed system**

1.logintbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| username | VarChar | 25 |  |
| Password | Varchar | 20 |  |

2.flattbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| flat\_no | VarChar | 15 | Primary key |
| flat\_floor | VarChar | 20 |  |
| flat\_building | VarChar | 25 |  |
| flat\_builtup | VarChar | 30 |  |
| flat\_maintain | VarChar | 30 |  |
| flat\_price | VarChar | 15 |  |
| flat\_available | VarChar | 20 |  |

3.duplextbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| duplex\_no | VarChar | 20 | Primary key |
| duplex\_name | VarChar | 30 |  |
| duplex\_builtup | VarChar | 20 |  |
| duplex\_maintain | VarChar | 20 |  |
| duplex\_price | VarChar | 50 |  |
| duplex\_status | VarChar | 20 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| customer\_ID | Primary Key | 20 | Primary key |
| customer\_name | VarChar | 30 |  |
| DOB | VarChar | 10 |  |
| aadhar\_no | VarChar | 12 |  |
| contact\_no | VarChar | 10 |  |
| gender | VarChar | 20 |  |
| address | VarChar | 50 |  |
| date | VarChar | 20 |  |

4.customertbl

5.stafftbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| staff\_ID | VarChar | 10 | Primary Key |
| staff\_name | VarChar | 30 |  |
| DOB | VarChar | 15 |  |
| aadhar\_no | VarChar | 12 |  |
| Address | VarChar | 50 |  |
| Designation | VarChar | 30 |  |
| Experience | VarChar | 70 |  |
| dated | VarChar | 20 |  |

6.FollowUptbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| followup\_ID | VarChar | 20 | Primary key |
| enquiry\_ID | VarChar | 20 | Foreign key |
| customer\_name | VarChar | 30 |  |
| gender | VarChar | 10 |  |
| description | VarChar | 40 |  |
| enquiring\_for | VarChar | 20 |  |
| status | VarChar | 25 |  |
| contact\_no | VarChar | 12 |  |
| date | VarChar | 10 |  |

7.bookingtbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| booking\_ID | VarChar | 20 | Primary key |
| date\_of\_booking | VarChar | 20 |  |
| booking\_type | VarChar | 20 |  |
| flat\_no | VarChar | 20 |  |
| duplex\_no | VarChar | 20 |  |
| builtup | VarChar | 20 |  |
| maintainance | VarChar | 30 |  |
| price | VarChar | 10 |  |
| customer\_ID | VarChar | 20 | Foreign key |
| customer\_name | VarChar | 30 |  |
| DOB | VarChar | 20 |  |
| aadhar\_no | VarChar | 12 |  |
| contact\_no | VarChar | 10 |  |
| gender | VarChar | 10 |  |
| address | VarChar | 30 |  |

7.Enquirytbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| enquiry\_ID | VarChar | 20 | Primary key |
| customer\_name | VarChar | 20 |  |
| DOB | VarChar | 15 | Foreign key |
| aadhar\_no | VarChar | 12 |  |
| contact\_no | VarChar | 10 |  |
| Gender | VarChar | 10 |  |
| Address | VarChar | 50 |  |
| Date | VarChar | 10 |  |
| enquiring\_for | VarChar | 20 |  |
| Status | VarChar | 20 |  |
| Remarks | VarChar | 30 |  |

11.payment\_tbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| payment\_ID | VarChar | 10 | Primary key |
| date\_of\_payment | VarChar | 10 |  |
| payment\_type | VarChar | 20 |  |
| booking\_ID | VarChar | 10 | Foreign key |
| booking\_type | VarChar | 20 |  |
| payment\_mode | VarChar | 10 |  |
| amount | VarChar | 20 |  |
| cheque\_no | VarChar | 15 |  |
| account\_no | VarChar | 15 |  |
| bank\_name | VarChar | 20 |  |
| customer\_ID | VarChar | 10 | Foreign key |
| customer\_name | VarChar | 20 |  |
| total\_amt | VarChar | 20 |  |
| amt\_paid | VarChar | 20 |  |
| amt\_due | VarChar | 20 |  |

10.canceltbl

|  |  |  |  |
| --- | --- | --- | --- |
| FIELD NAME | DATA TYPE | Size | CONSTRAINTS |
| cancel\_ID | VarChar | 10 | Primary key |
| booking\_ID | VarChar | 10 | Foreign key |
| date\_of\_cancel | VarChar | 10 |  |
| Reason | VarChar | 40 |  |
| customer\_ID | VarChar | 10 | Foreign key |
| amount\_paid | VarChar | 20 |  |
| amount\_deducted | VarChar | 20 |  |
| amount\_refunded | VarChar | 20 |  |

Data flow diagram :-

1.CONTEXT DIaGRAM/0-LEVEL DFD

**CONSTRUCTION MANAGEMENT SYSTEM**

DUPLEX\_INFO

STAFF\_DETAILS

STAFF\_INFO

STAFF

CUSTOMER

FLAT\_INFO

DUPLEX

FLAT

CUST\_INFO

CUST\_DETAILS

2. 1st level dfd

**customertbl**

**sttafftbl**

CUSTOMER

1 **1**

MASTER **ENTRY**

**canceltbl**

**Paymenttbl**

**Bookingtbl**

**followuptbl**

**flattbl**

**duplextbl**

REPORT

TRANSACTION ENTRY

**3**

**2**

DUPLEX

FLAT

STAFF

**Future scope of System**

This industry is taking up pace. Gradually organizations are coming with the idea of investing in this business. To standardize the operations they require the interface which would help them to monitor the activities of the system. This is a very hard working, large industry and requires to coordinate other small industries too.

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