HOTEL BILLING MANAGEMENT SYSTEM

PROJECT REPORT

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BONAFIDE

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ABSTRACT

Abstract must be a single paragraph in times new roman 14pt with a maximum of 300 words.

Restaurant billing System use case diagram defines the context and requirements of the entire software. It is shown using symbols to emphasize the project's definition.The main goal of this thesis was to develop a desktop based billing system for a restaurant. This desktop based application is designed to administer its users and customers. RBS is a billing system, made for the effective utilization of modern technology in the organization. It is an automated software that can handle a lot of information about the restaurant's employees, order history, reservation data. It has the capability to process bills and gather information about its employees and billing history. It is designed for the sole purpose of efficiency, speed and accuracy. This application allows the admin to view the detail history of day to day operation in terms of sales, add or remove the employee, add new menu, view the detail of the employee like name, address, salary and so on. Users' data need to be registered in the system so as to identify each of them uniquely and do the-the needed transaction as easy possible. Like on the name of the bill will be issued. Beyond this, a lot of things are there where we can reference him. To allow Customer according to the choice pay bill via cash or debit card or credit card method. Hence all the process works perfect, full filling the demands. This is system generated and is a unique one of the most useful attributes as we mandatory need this to reference it anywhere in the interfaces and clearly, show the data to the user interface and billing interface. Every food item is related to some sort of category to make it more refined while searching in the interfaces and finding the precise choice and order quickly. Price of every item is mentioned to make it accessible to calculate the bill and need to filter accordingly. Bill is calculated on the basis of items ordered and how many of individual items quantified. w billing is done once the customer is done with the meal, he/she ask for the bill and staff first click on the billing page and enters all the item's the customer had then the application shows the total amount include service tax and VAT and the user click on print bill option.

INTRODUCTION

The "Hotel Billing System" or "HBS" is an application to automate the process of information recording and billing of a restaurant. This desktop based application is designed to administer its users and customers. HBS is a billing system, made for the effective utilization of modern technology in the organization. It is an automated software that can handle a lot of information about the restaurant's employees, order history, reservation data. It has the capability to process bills and gather information about its employees and billing history. It is designed for the sole purpose of efficiency, speed and accuracy. It generates a unique transaction id for that according to the selection of the mode of payment. The icing on the cake is that it will be simply utilized by the staffs of various edifice departments and is hopped-up with extremely customizable strong options to fulfill each demand of your edifice, be it managing the stocks/inventory, increasing business potency, increasing table turnaround, managing totally different branches, aggregation client feedback, or managing any knowledge that's necessary for your edifice, no matter the placement and time, we have got it all coated.

Thereby, raising employees' potency and reducing client complaints. It depends upon the customer that what he exactly wants to purchase and what he needs at the time. He can opt for his choice of payment. This system has the capability of calculating the bill according to the total number of the item ordered and taxes are also added accordingly then shown to the customer in a proper bill.

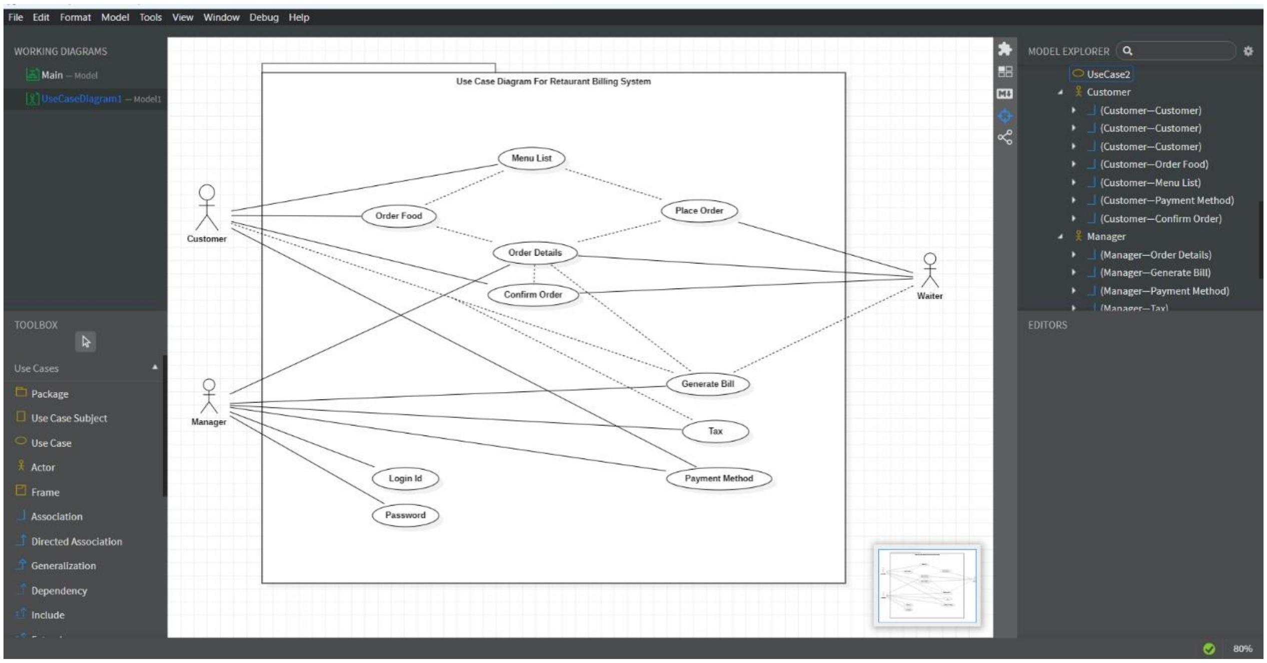
PROJECT DESCRIPTION

This Hotel billing system project is designed to add and maintain records of available menu The functional requirement of this is that it does what it is meant for. A functional requirement describes what a software system should do, while non-functional requirements place constraints on how the system will do so. Functional requirements specify a function that a system or system component must be able to perform. Few of its functional requirements are as. This system is doing that properly in user entity. Users are able to select the items for order, which is they are doing with this system. They can get their bill according to the items they have ordered and then they can pay through their card and cash as their will. They further can get their bill. Non-functional requirements of restaurant billing system source code necessities are often as. Execution qualities, like security and usefulness, that square measure evident at the run time.

MODULE DESCRIPTION

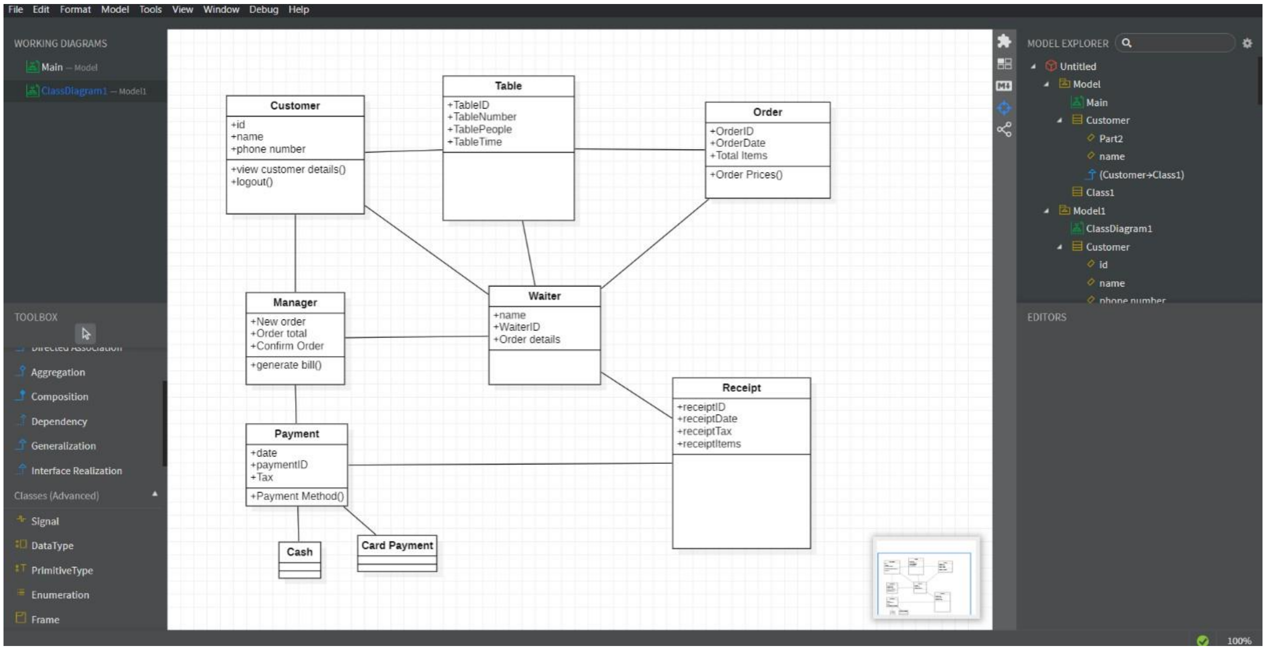
Hotel Billing System is a computer based billing system with user friendly interface which automatically manages the billing process of the customer very easily taking only a short period of time. The system can largeamount of data and also generates bill for the customer. Billing history, reservation information and staff information can also be obtained with the use of RBS. It is an automated desktop based software which has a simple design and very easy to use also. This project's main focus is on proper management of information regarding the staffs, billing and reservation records. It is also specialized in automatically processing the customer bills and discounts. The proposed system either does not require paper work or very few paper works are required. All the data is fetched into the computerimmediately and various bills can be generated through computers. Since allthe data is kept in a database, no data of the organization can be destroyed. Moreover works become very easy because there is no need to keep data on papers.

Use case diagram with explanation



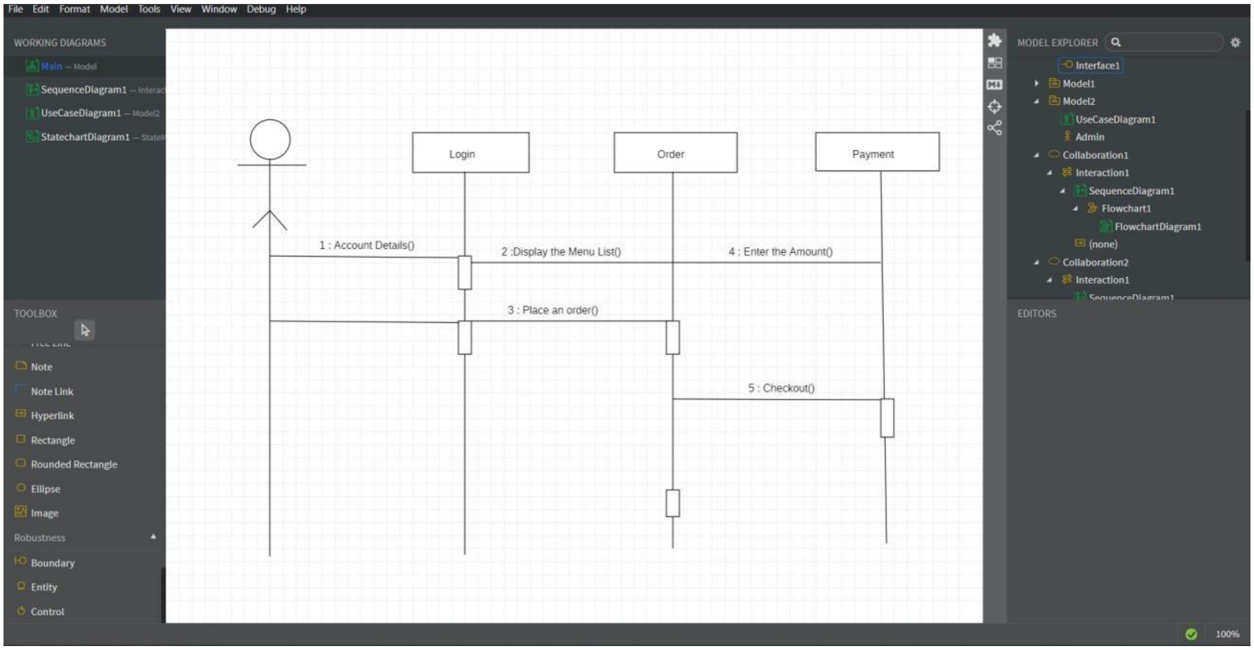
Use-case diagrams describe the high-level functions and scope of a system. These diagrams also identify the interactions between the system and its actors. The use cases and actors in use-case diagrams describe what the system does and how the actors use it, but not how the system operates internally.

Class diagram with explanation



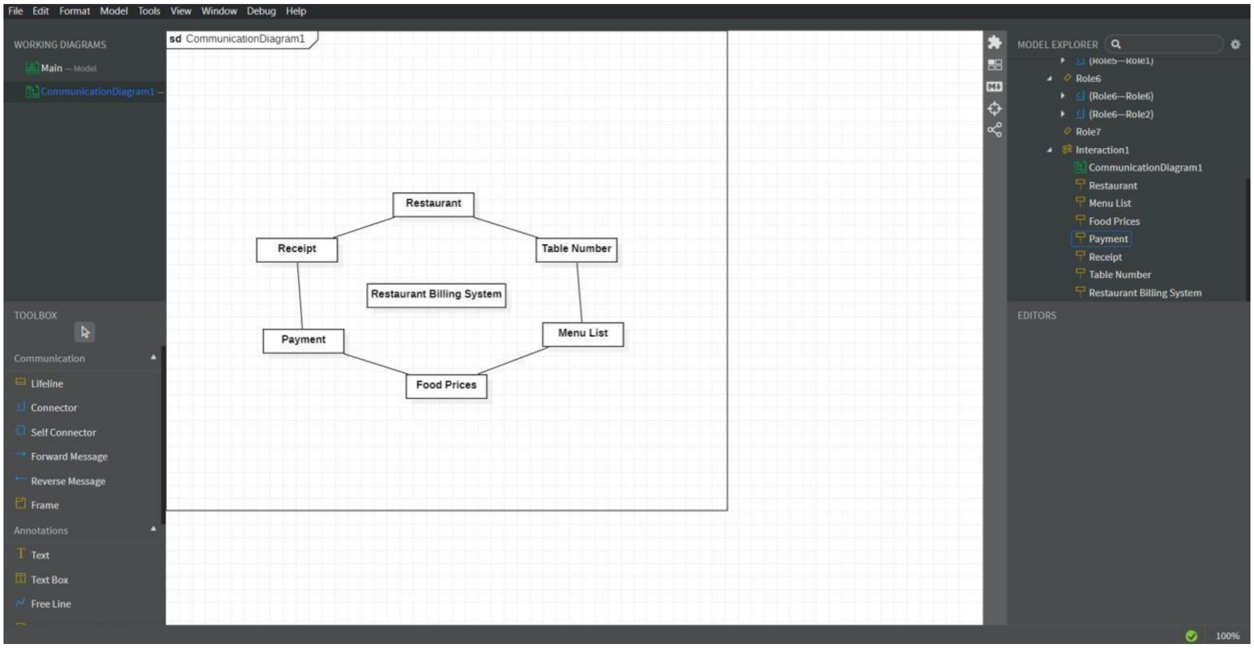
A class diagram is an illustration of the relationships and source code dependencies among classes in the Unified Modeling Language (UML). In this context, a class defines the methods and variables in an object, which is a specific entity in a program or the unit of code representing that entity.

Sequence diagram with explanation



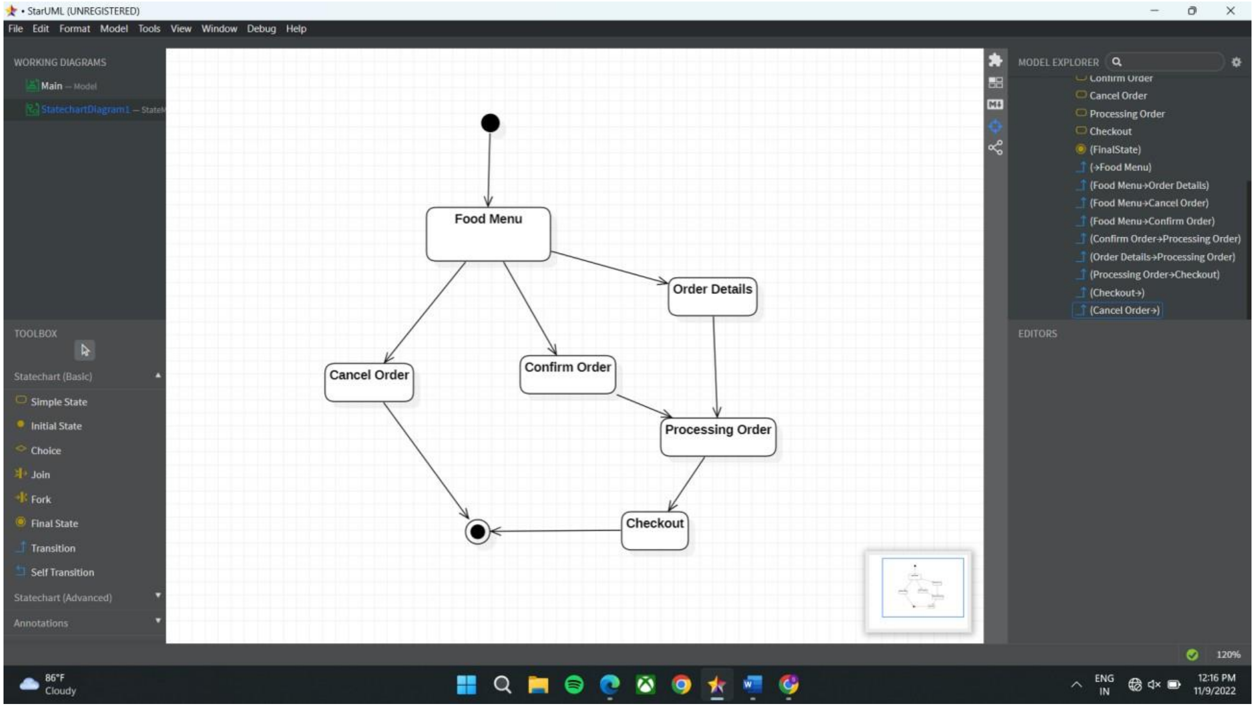
A sequence diagram consists of a group of objects that are represented by lifelines, and the messages that they exchange over time during the interaction. A sequence diagram shows the sequence of messages passed between objects. Sequence diagrams can also show the control structures between objects.

Communication diagram with explanation



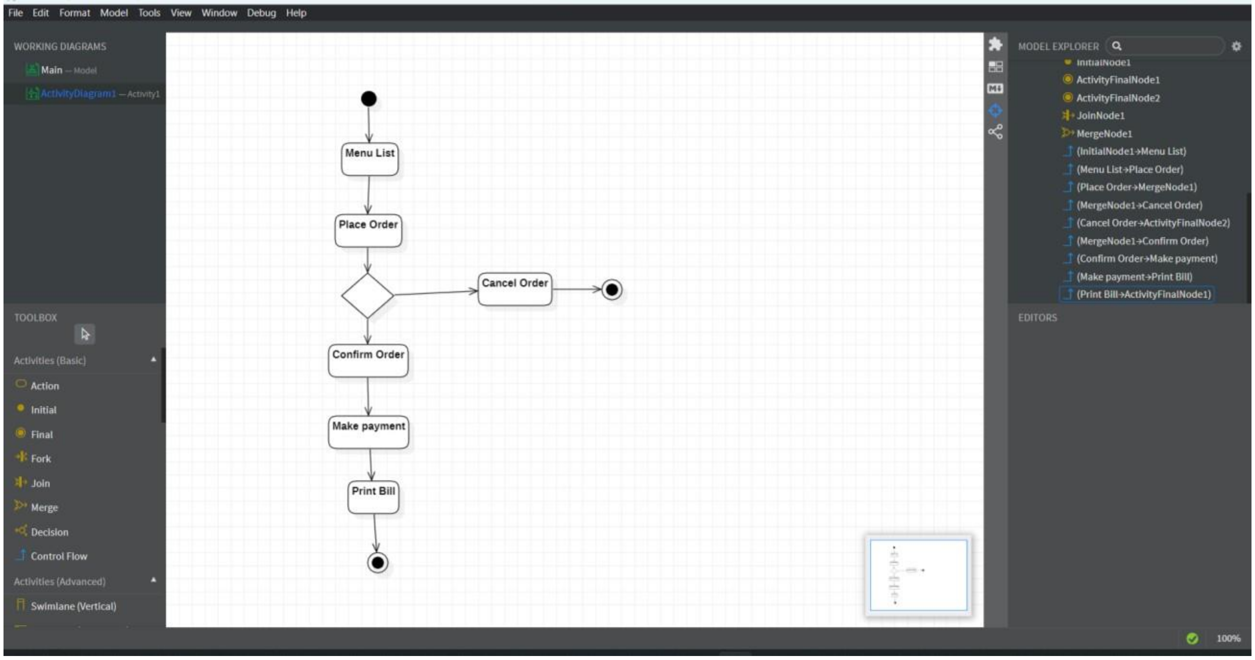
A Communication diagram models the interactions between objects or parts in terms of sequenced messages. Communication diagrams represent a combination of information taken from Class, Sequence, and Use Case Diagrams describing both the static structure and dynamic behavior of a system.

State chart diagram with explanation



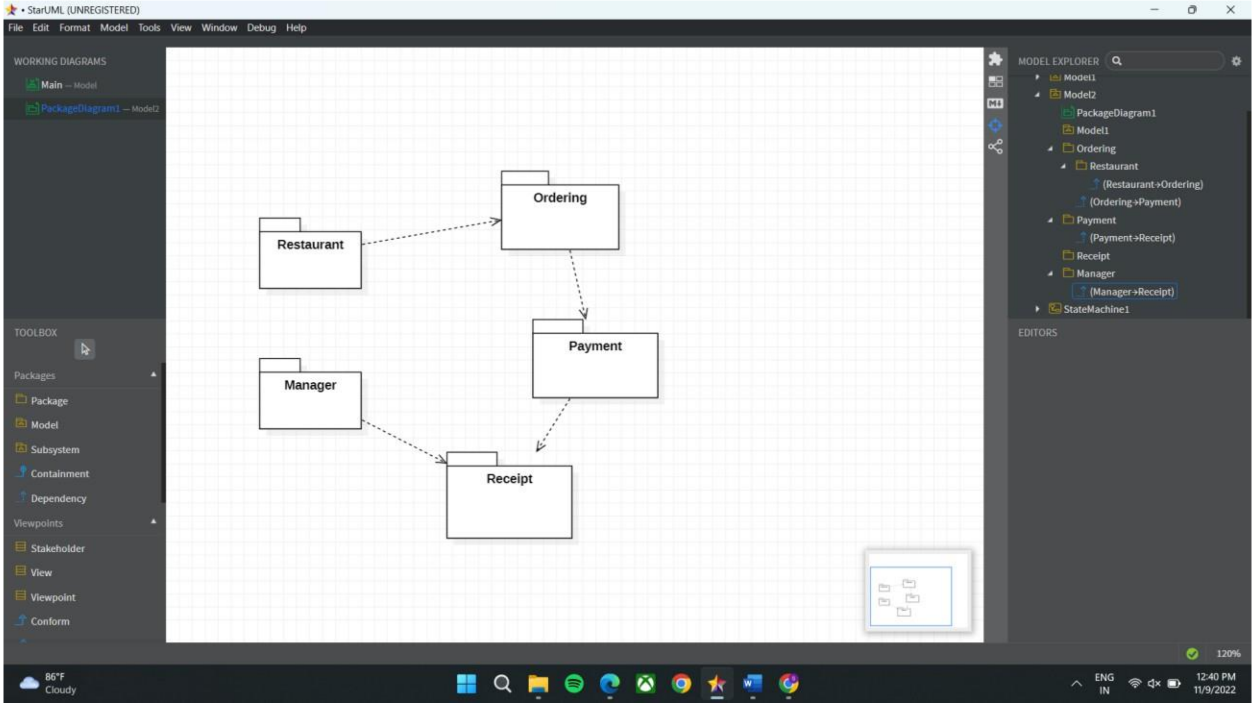
Statechart diagram describes the flow of control from one state to another state. States are defined as a condition in which an object exists and it changes when some event is triggered. The most important purpose of Statechart diagram is to model lifetime of an object from creation to termination.

Activity diagram with explanation



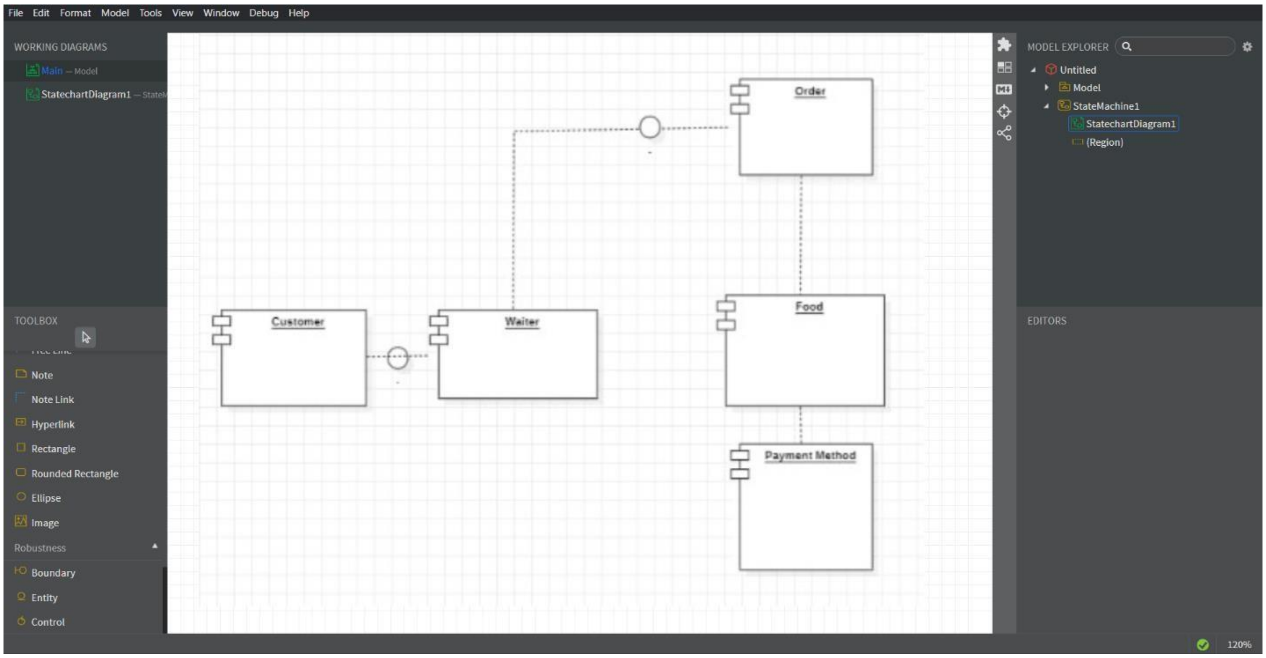
An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Activity diagrams are often used in business process modeling. They can also describe the steps in a use case diagram.

Package diagram with explanation



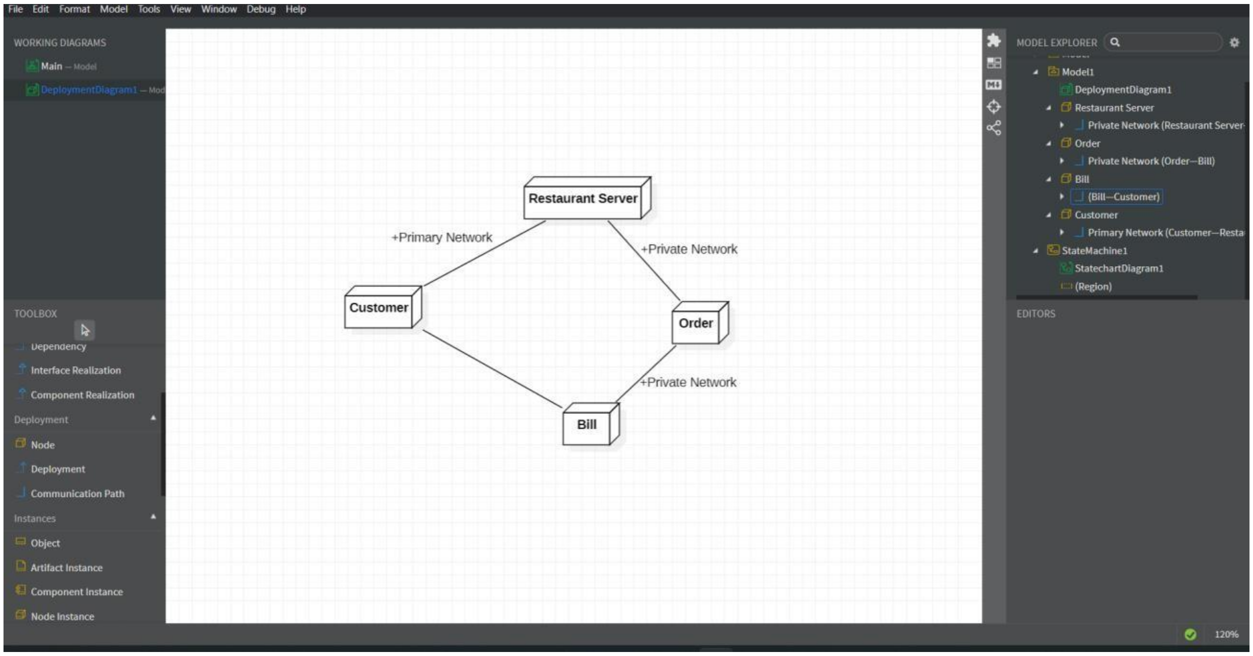
Package diagrams are structural diagrams used to show the organization and arrangement of various model elements in the form of packages. A package is a grouping of related UML elements, such as diagrams, documents, classes, or even other packages.

Component diagram with explanation



A component diagram, also known as a UML component diagram, describes the organization and wiring of the physical components in a system. Component diagrams are often drawn to help model implementation details and double-check that every aspect of the system's required functions is covered by planned development.

Deployment diagram with explanation



A deployment diagram is a UML diagram type that shows the execution architecture of a system, including nodes such as hardware or software execution environments, and the middleware connecting them. Deployment diagrams are typically used to visualize the physical hardware and software of a system.

CODE :

```
/**
 * Project Untitled
 */


#ifndef _ASSOCIATIONCLASS1_H
#define _ASSOCIATIONCLASS1_H

class AssociationClass1 {
};

#endif //_ASSOCIATIONCLASS1_H
```

```
/**
 * Project Untitled
 */


#ifndef _CARD PAYMENT_H
#define _CARD PAYMENT_H

class Card Payment {
};

#endif //_CARD PAYMENT_H
```

```
/**
 * Project Untitled
 */


#ifndef _CASH_H
#define _CASH_H

class Cash {
};

#endif //_CASH_H
```

```
/**
 * Project Untitled
 */


#ifndef _CUSTOMER_H
#define _CUSTOMER_H

class Customer {
public:
    void id;
    void name;
    void phone number;

void lm();

void view customer details();

void logout();
};

#endif //_CUSTOMER_H
```

```
/**
 * Project Untitled
 */


#ifndef _MANAGER_H
#define _MANAGER_H

class Manager {
public:
    void New order;
    void Order total;
    void Confirm Order;

void generate bill();
};

#endif //_MANAGER_H
```

```
/**
 * Project Untitled
 */


#ifndef _ORDER_H
#define _ORDER_H

class Order {
public:
    void OrderID;
    void OrderDate;
    void Total Items;

void Order Prices();
};

#endif //_ORDER_H
```

```
/**
 * Project Untitled
 */


#ifndef _PAYMENT_H
#define _PAYMENT_H

class Payment {
public:
    void date;
    void paymentID;
    void Tax;

void Payment Method();
};

#endif //_PAYMENT_H
```

```
/**
 * Project Untitled
 */

#ifndef _RECEIPT_H
#define _RECEIPT_H

class Receipt {
public:
    void receiptID;
    void receiptDate;
    void receiptTax;
    void receiptItems;
};

#endif //_RECEIPT_H
```

```
/**
 * Project Untitled
 */

#ifndef _TABLE_H
#define _TABLE_H

class Table {
public:
    void TableID;
    void TableNumber;
    void TablePeople;
    void TableTime;
};

#endif //_TABLE_H
```

```
/**
 * Project Untitled
 */


#ifndef _WAITER_H
#define _WAITER_H

class Waiter {
public:
    void name;
    void WaiterID;
    void Order details;
};
#endif //_WAITER_H
```

Conclusion

Finally, in the Hotel billing system source code, the outcome of all the time hard work is here. We have a system which takes the necessary choices ofthe customer according to the various filter like price, category of the food, and popularity. Then he is able to place the order accordingly and then the system calculates all the total of the order with taxes and then it can dispatch the bill that is handed over to the customer.

Customer according to the choice pay bill via cash or debit card or credit card method. Hence all the process works perfect, full filling the demands.

References

/1/ Hotel Billing System: Accessed 10.04.2017

https://www.scribd.com/doc/283903672/Online-Ordering-System- Project

/2/ Abstract :Accessed 10.04.2017

https://www.scribd.com/document/36253350/04-Project-Billing- System

/3/ Use Case Diagram: Accessed 12.04.2017

http://whatis.techtarget.com/definition/use-case-diagram

/4/ Class Diagram: Accessed 12.04.2017

http://searchmicroservices.techtarget.com/definition/class-diagram

/5/ Sequence Diagram : Accessed 14.04.2017

https://creately.com/blog/diagrams/sequence-diagram-tutorial

/ 6/ Communication Diagram : Accessed 14.04.2017

http://searchcrm.techtarget.com/definition/entity-relationship-diagram