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| --- | --- | --- | --- |
| Console Application | Client-Server Programming | Web based Application | Enterprise Application |
| This application is designed to provide a simple user interface for applications requiring little or no user interaction,such as samples for learning C# language features and command-line utility programs | A client/server application is a piece of software that runs on a client computer and makes requests to a remote server. | A web application is an application software that runs on a web server, unlike computer-based software programs that are stored locally on the Operating Systems of the device. | Enterprise applications are a software solution that provides business logic and tools to model entire business processes for organisations to improve productivity and efficiency. |
| Examples:  Bank ATM,  Device with a very small display type | Examples:  Email,  Network printing,  World Wide Web | Examples:  Online forms,  Shopping carts.  Applications:  Google maps,  Microsoft. | Example:  Billing systems,  Customer relationship management systems,  Supplier relationship management systems. |
| Console applications are light weight programs run inside the command prompt (DOS) window. They are commonly used for test applications. | Often such applications are database applications that make database queries to a remote central database server. | Web applications are programs that used to run inside some web server (e.g., IIS) to fulfill the user requests over the http. | For organisations to improve productivity and efficiency. |

**Difference between Console Application, Client-server Programming Application, Web based**

**application, Enterprise Application.**

**SDLC lifecycle**

1.requirement gathering

2.analysis

3.design

4.coding

5.testing

6.deployment

**To create library management system**

**Requirement Gathering**:

Data Requirements:

library member should be able to search books by title,author name.Each book will have a specific unique number for identification. The library database should have all the details about the collection of books in the library and the student database should contain all the details of students including roll no, name,books taken and given back.

Software Requirements: Sql, operatingsystem, Programming language

Hardware Requirements: Processor, Hard disk, RAM

**Analysis** :All the library data is computerized and is used to tack details of books like issues and return dates.Intial and feasibility study is done

**Design**:Creating a flow chart or uml diagram which will show the basic flow of the application about where to start with a step by step process. Database creation, logical design and construction is done

**Coding**: Writing a java code for the required application

**Testing**: This phase includes System testing,Software testing

**Deployment**: after all the testing is done the application is ready to use