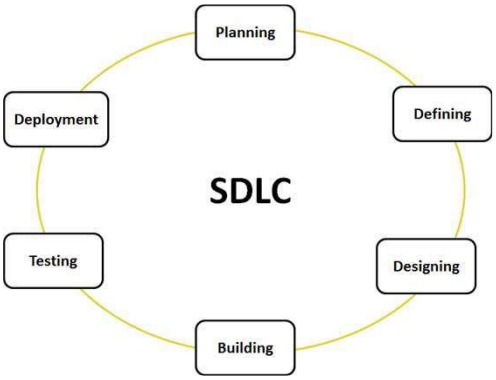
SDLC is a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.



SDLC Models

There are various software development life cycle models defined and designed which are followed during software development process. These models are also referred as "Software Development Process Models". Each process model follows a Series of steps unique to its type, in order to ensure success in process of software development. Following are the most important and popular SDLC models followed in the industry:

- Waterfall Model
- Iterative Model
- Spiral Model
- V-Model
- Big Bang Model

Net Framework is a software framework that primarily runs on Microsoft Windows. It is used for building, deploying and running applications as well as services that use .NET technologies.

Crystal Reports is a business intelligence application used to design and generate reports from a wide range of data sources. Several...

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crystal Reports is a popular Windows-based report writer (report generation program) that allows a programmer to create reports from a variety of data sources with a minimum of written code. Developed by Seagate Software, Crystal Reports can access data from most widely-used databases and can integrate data from multiple databases within one report using Open Database Connectivity (ODBC).

What is Manager ?

In the most basics terms, a manager is a person who helps others others get more done.
A manager helps others get more done by:

- Motivating them
- providing directions
- making sure they are working together toward a common goal
- removing roadblocks and
- Providing feedback.

The Beginning Manager

At the beginning, a manager may be responsible for a small team or a small project. Usually, a more senior manager will watch over his or her work. The manager will be expected to learn the strengths and weaknesses of the team members lay out the teams goals, assign work to each member to help to reach that goal, provide them the tools they need, and motivate them to do their part.

Money Management

A beginning manager usually has limited responsibility for money issues and little authority to approve or make expenditures. He or she probably must review and approve timesheets for their employees and may have authority to approve expense accounts within specific guidelines.

Goals and Planning

The goals typically are set for a beginning manager by someone higher up. The manager then develops the plans to achieve them. He or she provides feedback to their employees as they work to those plans.

Management Skill Development

Managers at all levels must continuously work to develop their skills. At a beginning level, two areas where a manager can focus their skill development are the ability to effectively manage their meetings and developing their own planning tools like a to do list that makes them more effective.

Leadership

Even from the very beginning, it is important to understand the differences between management and leadership. Managers who want to advance their careers will start to develop their leadership skills from the beginning.

Project Management

A successful Project Manager must simultaneously manage the four basic elements of a project: resources, time, money, and most importantly, scope. All these elements are interrelated. Each must be managed effectively. All must be managed together if the project, and the project manager, is to be a success.

- **Resources**
  People, equipment, material
- **Time**
  Task durations, dependencies, critical path
- **Money**
  Costs, contingencies, profit
- **Scope**
  Project size, goals, requirements

What is Project Management?

More specifically, what is a project? It's a temporary group activity designed to produce a unique product, service or result.

A project is **temporary** in that it has a defined beginning and end in time, and therefore defined scope and resources.

And a project is **unique** in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. So a project team often includes people who don't usually work together – sometimes from different organizations and across multiple geographies.

The development of software for an improved business process, the construction of a building or bridge, the relief effort after a natural disaster, the expansion of sales into a new geographic market — all are projects.

And all must be expertly managed to deliver the on-time, on-budget results, learning and integration that organizations need.

Project management, then, is the application of knowledge, skills and techniques to execute projects effectively and efficiently. It's a strategic competency for organizations, enabling them to tie project results to business goals — and thus, better compete in their markets.

It has always been practiced informally, but began to emerge as a distinct profession in the mid-20th century. PMI's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* identifies its recurring elements:

Project management *processes* fall into five groups:

- Initiating
- Planning
- Executing
- Monitoring and Controlling
- Closing

Differences between TCP and UDP

Transmission Control Protocol (TCP)
User Datagram Protocol (UDP) is a transportation protocol that is one of the core protocols of the Internet protocol suite. Both TCP and UDP work at transport layer TCP/IP model and both have very different usage.

Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) are the major protocols operating at Transport Layer. Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) operate very differently and you can choose Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) depending on your requirement.

TCP stands for Transmission Control Protocol and it guarantees delivery of data packets. This protocol provides extensive error checking mechanisms such as flow control and acknowledgment of data. Transmission Control Protocol (TCP) is a connection oriented protocol. Before transmitting data, a connection must be established between the devices participating in data transmission. If your Application require guaranteed delivery of data, then you must choose TCP as the Transport layer protocol.

UDP stands for User Datagram protocol and it operates in Datagram mode. The main difference you should notice here is User Datagram Protocol (UDP) is a connection-less protocol. User Datagram protocol (UDP) has only the basic error checking mechanism using checksums.
Difference between Transmission Control Protocol (TCP) and User Datagram Protocol (UDP)

Transmission Control Protocol (TCP)

1) Transmission Control Protocol (TCP) is a connection oriented protocol, which means the devices should open a connection before transmitting data and should close the connection gracefully after transmitting the data.

2) Transmission Control Protocol (TCP) assure reliable delivery of data to the destination.

3) Transmission Control Protocol (TCP) protocol provides extensive error checking mechanisms such as flow control and acknowledgment of data.
4) Sequencing of data is a feature of Transmission Control Protocol (TCP).
5) Delivery of data is guaranteed if you are using Transmission Control Protocol (TCP).
6) Transmission Control Protocol (TCP) is comparatively slow because of these extensive error checking mechanisms
7) Multiplexing and Demultiplexing is possible in Transmission Control Protocol (TCP) using TCP port numbers.
8) Retransmission of lost packets is possible in Transmission Control Protocol (TCP).

User Datagram Protocol (UDP)

1) User Datagram Protocol (UDP) is Datagram oriented protocol with no overhead for opening, maintaining, and closing a connection.
2) User Datagram Protocol (UDP) is efficient for broadcast/multicast transmission.
3) User Datagram protocol (UDP) has only the basic error checking mechanism using checksums.
4) There is no sequencing of data in User Datagram protocol (UDP) .
5) The delivery of data cannot be guaranteed in User Datagram protocol (UDP)
6) User Datagram protocol (UDP) is faster, simpler and more efficient than TCP. However, User Datagram protocol (UDP) it is less robust then TCP
7) Multiplexing and Demultiplexing is possible in User Datagram Protcol (UDP) using UDP port numbers.
8) There is no retransmission of lost packets in User Datagram Protcol (UDP).
Related Topics...

Table 5.19 TCP Ports and Associated Services

Default TCP Port Number	Internet Service
20	FTP Data Channel
21	FTP Control Channel
23	Telnet (enabled on some intranet or Internet servers)
25	Simple Mail Transfer Protocol (SMTP)
80	HTTP for World Wide Web
119	Network News Transfer Protocol (NNTP)
443	Hypertext Transfer Protocol over TLS/SSL (HTTPS) for secure World Wide Web
563	Network News Transfer Protocol over TLS/SSL (NNTPS)

Crystal Reports uses an ActiveX control called CrystalReport to establish a connection with another program. A programmer can set properties of the CrystalReport control during design time or at run time.

The programmer can use automation tools called Experts to be guided through common tasks, such as linking and embedding reports. Crystal Reports treats all text, graphics, and database fields as object s that a programmer can place, arrange, and format on forms. The program also generates a recordset object and code needed to perform programming tasks such as loop s or mathematical calculations.

Crystal Reports can create a report on the fly from user-defined variables and can convert it to HTML and publish it to the Web automatically.