

Information Technology Infrastructure - 01

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Information Technology Infrastructure 25%

- IT infrastructure
- Mobile computing
- Software applications
- Database systems
- Internet connectivity options
- Network services
- Cloud computing

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Learning outcomes

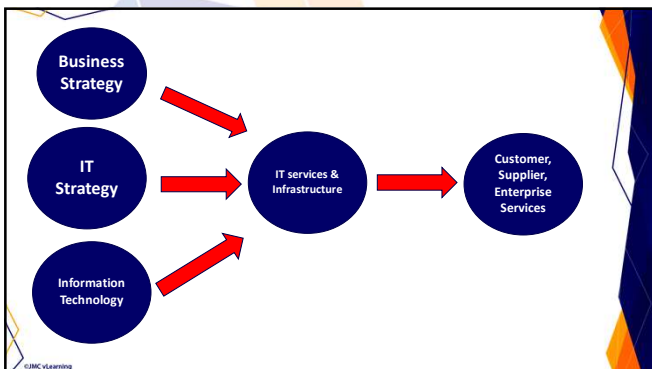
- Identify and describe the role of each component of organization's information technology infrastructure.
- Explain the different purposes of a mobile computing device which can be used in the current context.
- Identify the importance software and differentiate between forms of application software.
- Identify advantages and disadvantages of cloud storages and cloud softwares over the traditional versions.
- Process of obtaining the network and internet connectivity for corporates and factors affecting decision making.
- Key factors to consider when selecting a DB

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IT Infrastructure

- Defined as shared technology resources that provide the platform for the company's information system applications.
- Includes hardware, software and service such as consulting, education and training that shared across the company or across entire business functions.
- It infrastructure provides facilities to serving customers, working with vendors and managing internal business functions.

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Components of IT Infrastructure

- Hardware components
- Softwares
- Data centers
- IT equipments
- Legacy interfaces and softwares
- IT infrastructure framework also provides hiring, training, testing, upgrade and maintenance.

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Components of IT Infrastructure

1. Computer hardware platforms
2. Operating system platforms
3. Enterprise software applications
4. Data management and storage
5. Networking/ telecommunication platforms
6. Internet platforms
7. Consulting and systems integrating services

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Computer hardware platforms

- covers computer hardware including servers, client computers, data centers, switches, routers etc.
- Main frame computers are used to handle large volume of transactions , to analyze large quantities of data and to handle large workloads in cloud computing centres.

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Operating system platforms

- Widely used windows based operating systems
- Also dominated by Unix and Linux based operating systems
- Manage hardware and software resources
- Act as an interface for other application software to run and for the users
- Android is used for mobile devices such as smart phones and tablets.

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Enterprise software applications

- This is an important component of overall IT infrastructure
- Examples SAP and Oracle
- Another category is middleware software provides the integration facilities for the existing applications.
- Ex : IBM and Oracle provides integration facility

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Data management and storage

- DBMS helps to organize and manage company's data and information.
- Ex: Oracle, MS SQL and Sybase
- Apache Hadoop is an open source software provides framework for handling large volume of datasets
- Network based storage technologies (NAS) are used by large organizations to store their databases.

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Networking/ telecommunication platforms

- Networks and telecommunications provide backbone for connecting nodes within the business network as well the outside world.
- Uses TCP/IP protocol suite as a standard in enterprise network to build networks.

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Internet platforms

- Another general part of the organization infrastructure is Internet services supported by hardware and software platforms.
- Supporting services include hardware, company's website, and other related facilities such as web hosting services, routers, cabling or wireless equipments.

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Consulting and systems integrating services

- This process includes finding necessary staff skills, budgets, and necessary experience to set up and maintain the IT infrastructure.
- Software integration is the process which ensures the new infra works smoothly with the organization's existing older system and confirms that new elements are compatible.

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Evolution of IT Infrastructure

- General purpose mainframe and mini computer
- Personal computing
- Client server networks
- Enterprise computing
- Cloud and mobile computing

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Mobile computing devices

- Laptops
- Netbooks
- Smartphones
- Tablets
- Ultra mobile pcs
- PDAs

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Software Applications

- Software applications can be broadly classified in to two
 1. General purpose softwares
 2. Application specific softwares

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General purpose software

- Helps to perform end user requirements.
- Has different types of licensing
 - Proprietary license
 - freeware
 - shareware
 - open source

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Application softwares

- Word processing software
- Spreadsheet software
- Desktop publishing software
- Database software
- Presentation software
- Web browsers
- E mail software
- Graphic software
- Communication software
- Accounting software

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Word processing software

- Allows users to create, edit, format ,save and print documents.
- Allows to add color, headings and pictures or delete, copy ,move and change the documents.
- Ex: MS-Word

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Spreadsheet software

- Document that stores data in a grid of rows and columns to form cells.
- Features
- Numerical calculations related to financial reports and budgets.
- Creation of worksheets and workbooks
- Text entries
- Facilitates to insert charts
- MS excel, google sheet, open office, iWork numbers for apple

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Desktop publishing software

- Used to create visual communications such as brochures, business cards, greeting cards etc.
- Professional desktop publishing softwares Adobe-Indesign, Microsoft publisher, Quarkexpress, Serif-pageplus, scribus

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