UNIT-VI

Digital project Management :-

* Digital technology trends in project management :-

Digital project management is the leading, planning, organising, motivating and delivery of the project using web development. It is a process which manages the digital data, pixel, screen (landscape, portrait mode) and interfaces.

examples :- Email, video, website, games, videos, events, E-commerces, social media, Mobile apps etc.

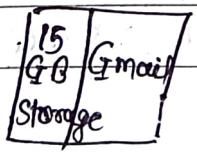
project management + Digital world (Autocad, HTML, CSS) ⇒ Digital project management

Digital project management is managing projects in a digital world.

* Cloud computing :- It gives the user access to storage, files, software, server through their internet connected devices. Such as computer, tablet etc. It can store and process the data in a location that seperate from the client to client.

There are three types of cloud computing
Saas :- Software as a service
Paas :- platform as a service
Iaas :- Infrastructure as a service

example :- cam scanner, gmail account (15 GB).



* Internet of Things :- (IOT) :-

The IOT is a network of interrelated devices that connect and exchange the data with other IOT devices and a cloud. They are embeded with the technology with multiple sensors and software which include the digital machine.

eg :- smartwatch, smartfan, smart AC, smart homeautomation, alexa.

These devices collect and exchange data creating a "smart" environment where the physical and digital worlds ~~enable to~~ are integrated. The primary goal of IOT is to enable these devices to communicate with each other, share information and make intelligent decisions without human intervention.

* virtual reality (VR) :-

It is the use of computer modeling and simulation that enable a person to interact with the artificial 3D environment in a typical VR format, a user wearing a helmet, goggles, stereoscopic, screen view, animated images in the environment (computer environment).

* Data science and Analytics in the project management :-

Data science maths and statistics specialised programming, AI, and machine learning with specific subject matter to uncover the hidden data in an organisation data. This will help us in ~~desi~~ decision making and strategy planning.

A datascience project has following stages :-

i) Data ingestion : ex- social media, IOT.
ii) Data storage and processing
iii) Data analysis.
iv) Communication.

* Smart city :-

It is the modern urban area that uses different types of electronic method and sensor to collect the data across the city. to improve the quality of life for its citizen, enhance sustainability.
Smart city integrates information and communication technology to manage and govern the city's resources, infrastructure and services.

Features of smart city are:-

i) Intelligent Transportation system :- Smart traffic management, smart parking etc.
eg :- (a) Smart parking can help drivers find a parking space and also allow for digital payment.
(b) Smart traffic management to monitor traffic flows and optimise traffic light to reduce congestion.

ii) Smart energy management :- Renewable energy sources, energy efficient buildings and smart grids.
eg :- Streetlights that dim when the roads are empty.

iii) Smart water management :- Smart water system used to detect leak, and water quality monitoring

iv) waste management system :- Smart waste collection, recycling and reduction programs.

v) education and digital literacy :- Access to digital resources, online learning platforms and digital skills training.

vi) public safety and security :- Surveillance systems, emergency response system and crime analytics.

vii) Smart Home and building :- when we enter the room light automatically on and other purpose

viii) Smart technology can improve the efficiency of manufacturing, urban farming, energy use, smart parks and more.

Advantage :-

i) Improved efficiency :- streamlined services, reduced waste and optimized resource allocation.

ii) Enhanced quality of life :- Better public safety, healthcare, education and infrastructure.

iii) Energy Sustainability :- Reduced carbon footprint, energy efficiency, and environmental protection.

iv) Economic growth :- Attraction of business, talent and investments.

Disadvantages :-

i) High initial investment :- significant cost for infrastructure and technology.

ii) Limited privacy and security concern :- Risks of data breaches, surveillance and cyber attacks.

iii) environmental impact of technology

Define digital project management? what its types?

Digital project management is defined as the use of digital tool to leverage knowledge, skills and techniques to accomplish project activities in digital workspaces and achieve goals." In case of normal project management, you could just add. "In digital spaces" to the end of that definition and call it digital project management.

e.g:-
- Software and mobile app development.
- website design and development
- UI/UX designs.
- Digital Marketing campaigns.

Roles of a digital project manager:-

- The digital project manager primarily manages people and their tasks
- He/she is responsible for the project success and guide him/her team members to complete deliverables on time.
- Defining a project scope,
- project planning is done to achieve the project's goals.
- it manages people, budgets, tools and time required.
- Maintaining, managing and delegating resources effectively.
- Managing and control the risks.

Digital project management process:-

i) Initial planning
ii) Scoping
iii) Development
iv) Testing/checking and deployment.
v) Maintenance.

Difference bet virtual Reality (VR) & Augmented Reality (AR):-

Augmented Reality (AR)	virtual Reality (VR)
i) AR is the use of digital layer which is superimposed on the real physical world and it mix real world with virtual world to enhance user experience. i.e:- Real world + virtual world = Augmented Reality	i) VR is the use of computer technology to create a simulated environment and make user feel like they exist in that environment.
ii) A digital layer is superimposed on the real physical world.	ii) computer technology to create a simulated virtual world.
iii) Mix of real world and virtual world	iii) It creates an entire virtual world by using a HMD (Head Mounted Devices)
iv) user can clearly differentiate betn real world and virtual world.	iv) for user its hard to differentiate what is real and what is virtual.
v) user is not cut off from the real world	v) user is completely immerged in an artificial world, cut off from the real world.
vi) it requires devices such as- smart phone, tablet, laptop, smart lenses etc.	vi) VR requires head mounted devices (HMD) or additional equipment's.

- both are used in health care industry, defence for military training, Education, Digital marketing, Gaming and entertainment.

Analyse the benefits of AR and VR in project management.

- Reduces time and costs.
- Reduce errors
- Reduce the project risks.
- facilitates monitoring of projects.
- facilitates to understand large amount of data.
- facilitates in decision making and problem solving.
- Monitor work processes.
- Increase in efficiency and productivity.
- Increase in competitive ability.

Q. Explain digital trends / digital Technology trends in project management.

Here are some of the most important digital technology trends in project management.

i) Artificial intelligence (AI) and automation :-

- AI and automation are being used to automate tasks, improve decision-making and improve project performance.
- ~~for example:-~~

ii) Machine learning :- Machine learning algorithms for task automation, risk analysis and team performance optimisation.

iii) Hybrid project management :-

- Hybrid project management combines traditional and modern methods for project ~~measure~~ management.

iv) Data analytics :- • Data analytics is being used to identify areas for improvement.

- for eg- data analytics can be used to track project cost identify bottlenecks and measure ~~Consumer~~ Customer satisfaction.

vi) Big data / Advanced project management tools and solutions :-
- There are a number of advanced project management tool and soft available to track progress and manage project more effectively.
- Ex - Risk management software, change management software etc.

vii) project management information systems (PMIS) :-
- Integrated system for project planning, execution and monitoring.

viii) Increased remote working :-
- Many project managements tools provide working from home options, in which employess work away from a central office.
- Remote workers typically use technology for communication.

ix) Cybersecurity :- system
- Advanced security measures to protect project data, system and stakeholders.

x) IOT :- IOT sensors for real-time monitoring, asset traking and resource optimisation.

xi) cloud computing :-
cloud-based platforms for collaboration, data storage and remote work.

Q. what are the benefits of using digital technology in project management?

- Increased efficiency:-
→ digital technology can helps teams to be more efficient by automated tasks and providing real-time visibility of project progress.
- Improved Communication:-
→ Digital technology can help to improve communication both team members, stakeholders and customers.

- Enhanced decision-making:-
→ Digital technology can help teams to make better decisions and can identify areas for improvement.
- Reduced Risk:-
→ Digital technology can help to reduce risk by identifying potential problems in early stages.

- Reduced cost:-
→ Digital technology can help to reduce cost through automation process and reduced paper work.

- Enhanced customer satisfaction:-
→ digital technology can help to improved customer satisfaction by improving quality, reduced defects and productivity
- Enhanced transparency and increased transparency:-
→ digital technology can help to monitor real-time, progress tracking, resource optimization and stakeholder updates.