



Archbishop Beck Catholic College

KS5 Scheme of Work

Year 12 BTEC IT



Lesson Sequencing	The High 5 lesson : to be used throughout year	Further learning opportunities
<p>Unit 2 - Creating systems to manage information.</p> <p>A1 Relational database management systems</p> <p>A2 Manipulating data structures and data in relational databases: Use of RDBMS software tools and structured query language (SQL) for defining, modifying and removing data structures and data</p> <p>A3 Normalisation: The role of normalisation to develop efficient data structures</p> <p>B1 Relational database design: Selection of RDBMS and SQL software, tools, techniques and processes</p> <p>B2 Design documentation: The features and characteristics of relational database design techniques and their application to solve problems</p> <p>C1 Producing a database solution: Select and configure appropriate RDBMS and SQL tools</p>	<p>Consolidation: Tasks to support prior learning including past exam tasks, modelling knowledge of software applications, assessment of exemplar designs with the use of peer and self-assessment.</p> <p>Modelling: With the use of past exam model answers use to develop knowledge, application, analysis and evaluation for the higher mark questions on the exam. The use of exemplar coursework task examples, exemplar answers and mark schemes for examination units. Teacher led to start with then in groups, pairs and individually with the use of notes to support independence as confidence increases.</p> <p>Response and Feedback: Q & A, oral feedback to whole class and individuals, written feedback on coursework tasks, improvement tasks, extension tasks, peer improvement tasks, detailed marking of written tasks, next step marking.</p> <p>Challenge: use of relevant extension tasks, use of model answers and examples of coursework tasks. Independent research of tasks using online resources such as the online level 3 BTEC IT textbook and YouTube tutorials.</p> <p>Independence: Research homework tasks which</p>	<p>Extension directed questioning, extended questions focus on all topics, use of the online textbook, challenge activities incorporated into response and feedback, peer support and self-assessment. All students are given access to the Distinction tasks regardless of target grade.</p> <p>You tube tutorials used to practice the use of the software applications used in class.</p>

to produce a database solution to meet client's requirements
C2 Testing and refining the database solution
Evaluation: Evaluating a design against the given requirements

D2 Evaluation on database testing
Evaluating the application of test data to ensure that the database solution meets Requirements.

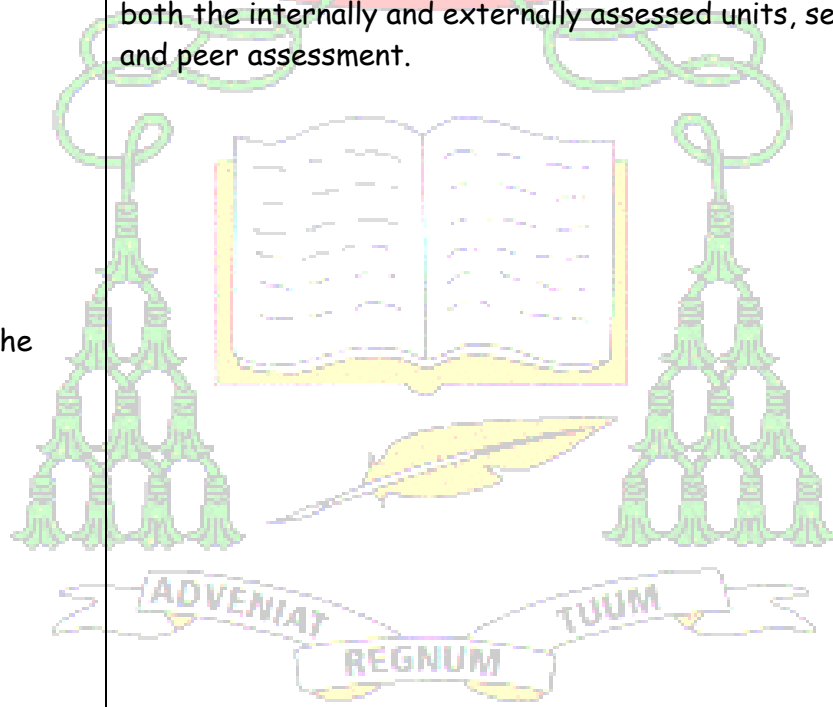
D3 Evaluation of the database
Evaluating the software outcome against the given requirements

Unit 3 - Social Media in Business

Explore the impact of social media on the ways in which businesses promote their products and services

- A1 Social media websites
 - A2 Business uses of social media
 - A3 Risks and issues
- Explore the impact of social media on the ways

include examination tasks and independent coursework tasks to complete using the user guides available to promote independence and confidence of using the different software applications. Coursework tasks for both the internally and externally assessed units, self and peer assessment.



in which businesses promote their products and services

A1 Social media websites

A2 Business uses of social media

A3 Risks and issues Explore the impact of social media on the ways in which businesses

promote their products and services

B1 Social media planning processes:

Processes to consider when planning the Potential use of social media in a business including.

B2 Business requirements

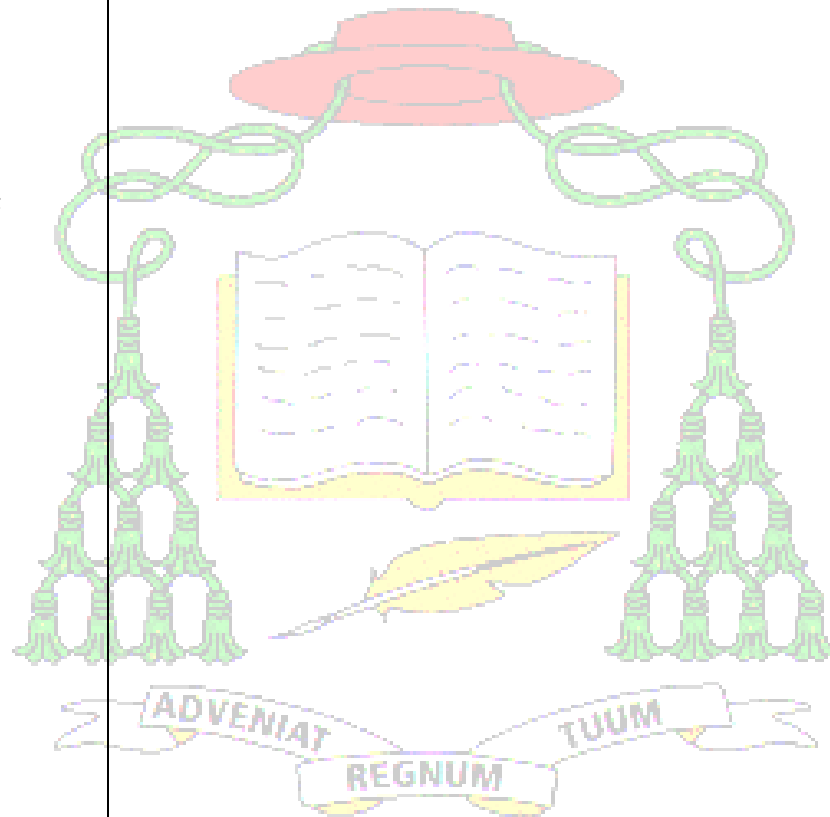
B3 Content planning and publishing.

Planning posts and other content to be published on social media websites, including:

B4 Developing an online community

Working with a client to develop a strategy to encourage online community building, including:

Implement the use of



social media in a business

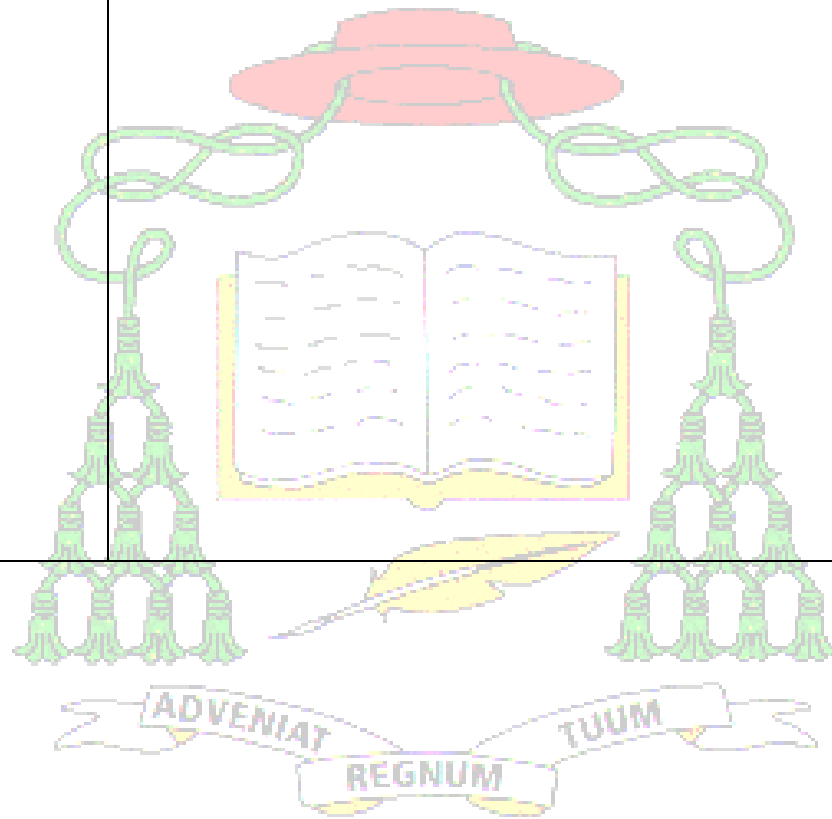
C1 Creating accounts and profiles

C2 Content creation and publication

C3 Implementation of online community building

C4 Data gathering and analysis

C5 Skills, knowledge and behaviours





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<p>Unit 1- Information Technology Systems</p> <p>Digital devices</p> <p>Use of devices;</p> <ul style="list-style-type: none"> ▪ Education and training ▪ Creativity ▪ Personal ▪ Social ▪ Retail/commerce ▪ Organisational use <p>Input/output systems</p> <p>Device flow diagram</p> <p>Input devices</p> <ul style="list-style-type: none"> ▪ Features ▪ Examples <p>Output devices</p> <ul style="list-style-type: none"> ▪ Features <p>Examples</p> <p>Accessibility</p> <p>Accessibility of devices;</p> <ul style="list-style-type: none"> ▪ Trackball ▪ Touchscreen ▪ Eye motion ▪ Braille embosser 	<p>Consolidation: Tasks to support prior learning including past exam tasks, modelling knowledge of software applications, assessment of exemplar designs with the use of peer and self-assessment.</p> <p>Modelling: With the use of past exam model answers use to develop knowledge, application, analysis and evaluation for the higher mark questions on the exam. The use of exemplar coursework task examples, exemplar answers and mark schemes for examination units. Teacher led to start with then in groups, pairs and individually with the use of notes to support independence as confidence increases.</p> <p>Response and Feedback: Q & A, oral feedback to whole class and individuals, written feedback on coursework tasks, improvement tasks, extension tasks, peer improvement tasks, detailed marking of written tasks, next step marking.</p> <p>Challenge: use of relevant extension tasks, use of model answers and examples of coursework tasks. Independent research of tasks using online resources such as the online level 3 BTEC IT textbook and YouTube tutorials.</p> <p>Independence: Research homework tasks which</p>	<p>Extension directed questioning, extended questions focus on all topics, use of the online textbook, challenge activities incorporated into response and feedback, peer support and self-assessment. All students are given access to the Distinction tasks regardless of target grade.</p> <p>Youtube tutorials used to practice the use of the software applications used in class.</p>

- Optical char recognition

Adaptive technologies

Data processing

Manual processing

Automatic processing

- Biometrics
- Barcodes
- OMR/OCR

Smart meters

Storage devices

Hard Disk Drives

Solid State Drives

SD Cards

USB memory sticks

Flash storage

Optical disks

Magnetic tape

Threats to data

Threats of data;

- Malware
- Hackers
- Trojans
- Phishing
- Accidental damage

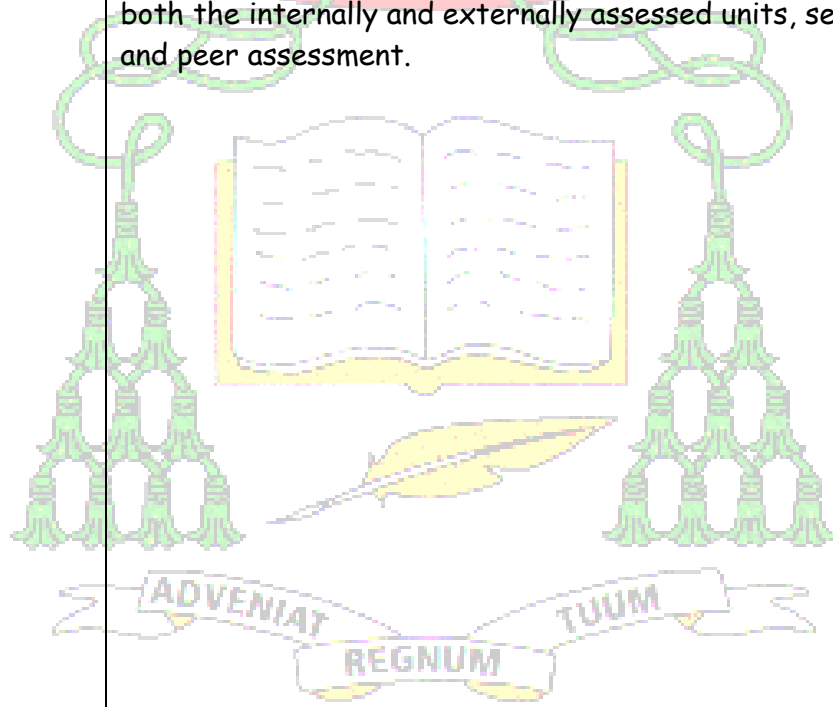
Viruses

Worms

Spyware

Fraud

include examination tasks and independent coursework tasks to complete using the user guides available to promote independence and confidence of using the different software applications. Coursework tasks for both the internally and externally assessed units, self and peer assessment.



Reputation

Legislation

Legislation;

- Data Protection act
- Computer misuse
- Copyright
- WCAG
- Health and safety

Freedom of speech

Online services

Online services;

- Retail
- Financial
- Education
- News/info
- Entertainment and Leisure
- Productivity

Booking systems

Networks

Networks;

- LAN
- WAN
- PAN
- VPN

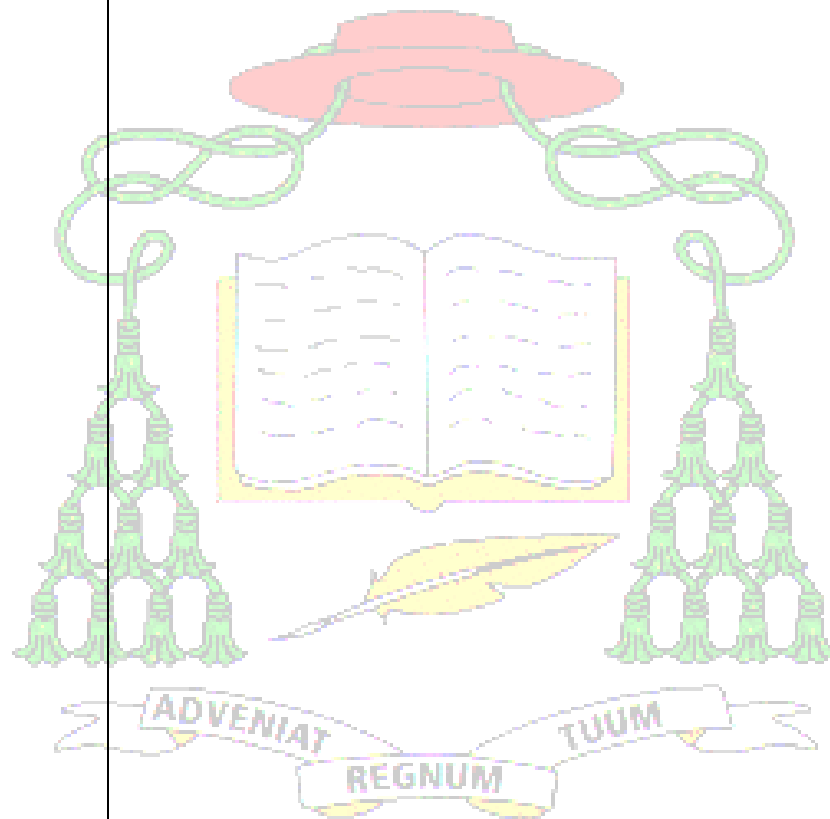
Choice and performance

User experience

User needs

Specifications

Connectivity



Cost
Efficiency
Compatibility
Implementation
Productivity
Security
Components
Performance factors
Protocols

Protocols;

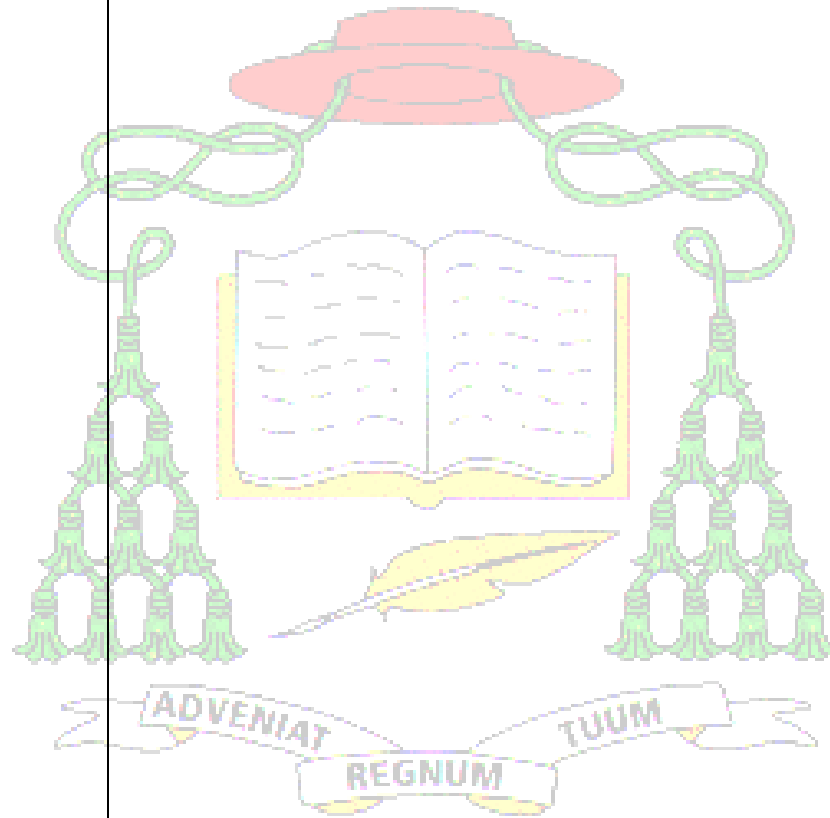
- TCP/IP
- SMTP
- POP3
- IMAP
- H.323
- SIP
- RTP
- HTTP
- HTTPS
- FTP
- SSL
- TLS
- POP

VOIP

Connection methods

Wired Connection methods

- Cat5
- Coaxial
- Fibre Optic



Wired device connections

- VGA
- HDMI
- USB

Wireless connections

- WiFi
- 3G/4
- Satellite
- Microwave
- Bluetooth
- Wi-Fi

Direct

Operating systems

Operating systems

Purpose and role

RTOS

SUST

SUMT

MUOS

Performance factors

Security

Memory management

Multitasking

Device drivers

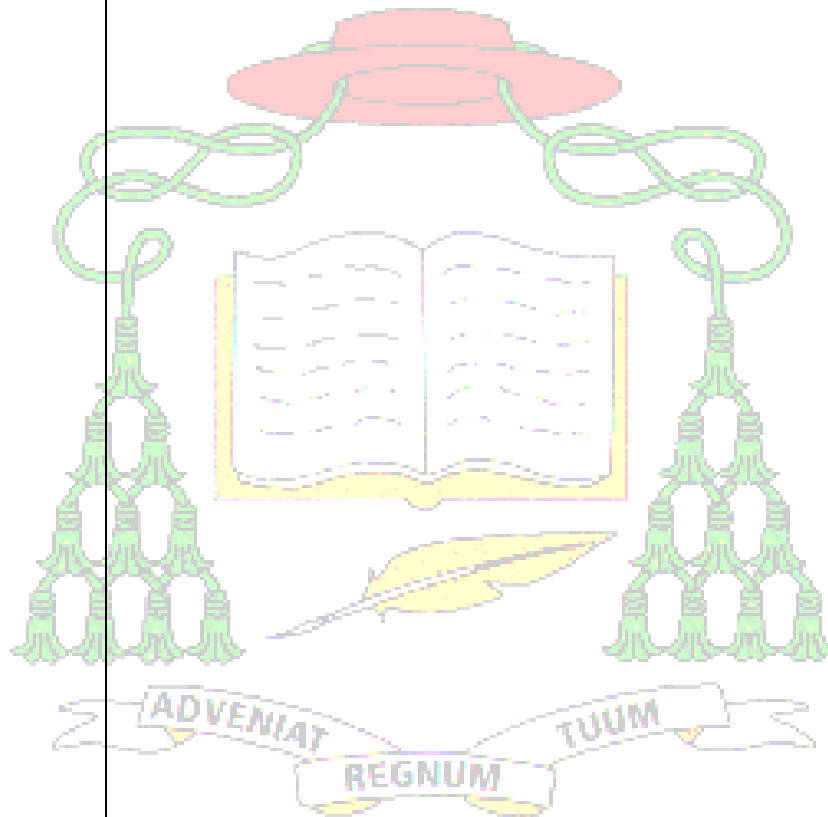
Interfaces

Command line interfaces

Graphical user interfaces

Menu based interfaces

IT Systems



Factors of choice

User experience

Specifications

Connectivity

Cost

Efficiency

Productivity

Implementation

Security

Online systems

Cloud storage

Cloud computing

Personal use/ Professional use

Pros and cons

Online systems:

- Features
- Connectivity

Remote working

Online communities

Social media

Blogging

Wiki

Chatrooms

Instant messaging

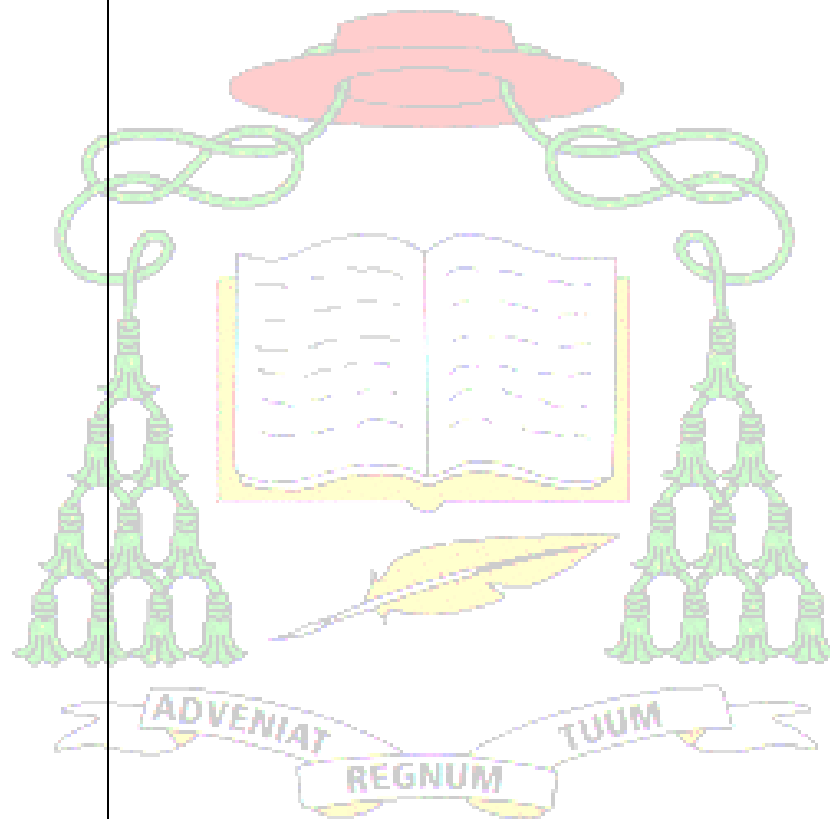
Podcasts

Forums

V-Blogs

Microblogs

Implications:



- Privacy
- Cost
- User experience
- Cost
- Employee experience
- Working practices
- Ethics
- Social impacts

Productivity

Current systems

Security

Customer needs

Meeting needs

IT systems

Businesses;

- Collaborative working
- Version control
- Transactional data
- Targeted marketing
- Remote access

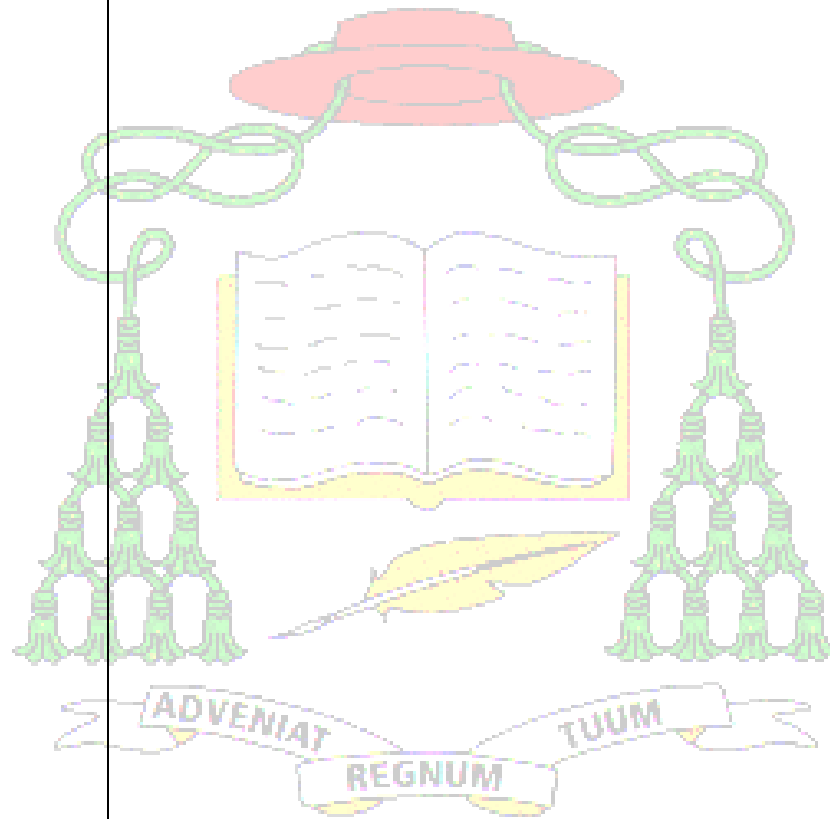
Uses and implications;

- Stock control
- Data logging/analysis
- General office tasks
- Creative tasks
- Online advertising

Manufacturing Security

Impact on organisations

Impacts;



- User experience
- Employee needs
- Customer needs
- Cost
- Implementation
- Integration of systems
- Working practices
- User support
- Staff support/training

Security

Gathering data

Gathering data:

- Sources of data
 - Primary
 - Secondary
- Data reliability
- Questionnaires
- Interviews

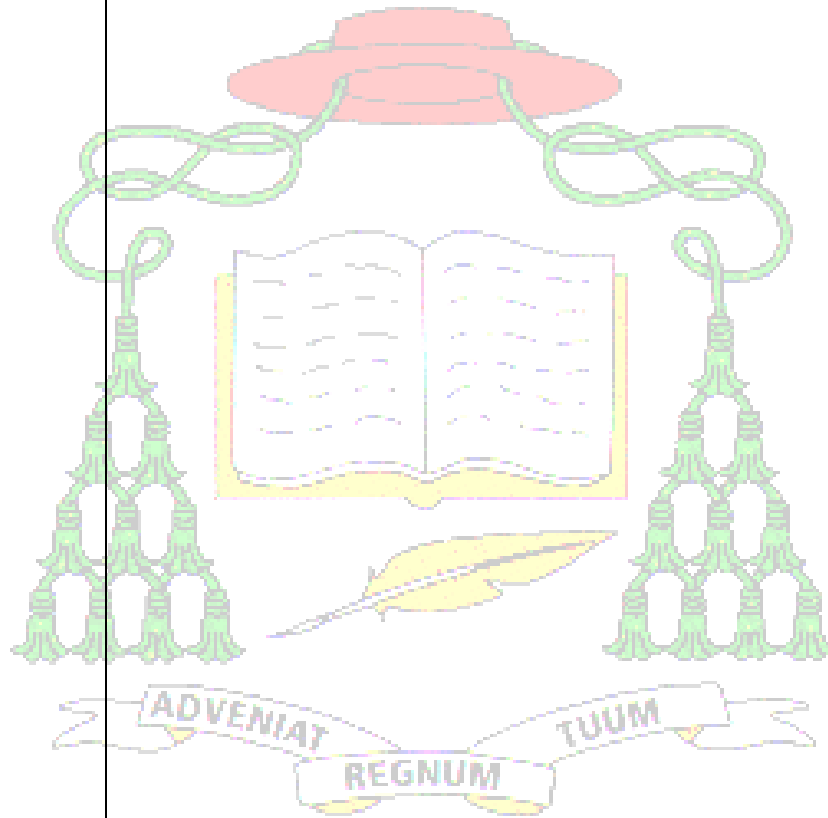
Focus groups

Processing data

Processing data:

- Accuracy
- Methods of accuracy
- Reliability
- Validation
- Verifications
- Extracting and sorting data

Numerical data modelling



Unit 6-Website Development

Website Development
Planning, Creation & Evaluation

