**Barcode Reader** (Scanner)
- Inputs data read from barcodes
- Used at EFTPOS terminals
- Used at ATMs to obtain cash
- Used in retail stores for bill payments
- Very fast reading
- Easy to use
- Keyboard used if reader not working
- Used to read barcodes on books, videos, food etc
- Used in automatic registration systems
- Fast data entry
- Less likelihood of errors
- Bar code labels can be damaged (flimsy)
- Plastic covering over bar code hinders reading

**Pin Pad & Chip Reader**
- Used at EFTPOS terminals
- Used at ATMs to obtain cash
- Card fraud reduced significantly as a PIN is used - not a signature
- PIN checking is computerised - risks of human error are eliminated
- The PIN is something else the customer must remember
- Transaction process for chip and PIN payment is less time consuming
- The PIN is compared with that stored in the chip
- The device checks if the card is valid
- The customer types in the PIN
- The PIN is the same so the transaction is authorized
- Process of...
  - The card is inserted into the reader
  - Computer reads data on stripe
  - Holds small amount of data
  - Robust: Sturdy and strong in form than bar codes
  - Easy to copy/forge
  - Smart cards (chip replaced magnetic stripe)
  - Start date
  - Date of issue
  - Bank code / Sort code
  - Branch code
  - Customer code / Account number / Card number
  - Expiry date
  - Verification/security number
  - Credit limit
  - Info stored on card
  - Personal Identity Number
  - Customer name
  - Used at EFTPOS terminals
  - Used in ATM (cash machines)
  - Used in libraries to read borrower numbers

**Smart Card Reader**
- Used in libraries to read borrower numbers
- Used for identification, authentication, and data storage
- Significantly reduces fraud
- Can be damaged if used in a persons pocket (with keys for example)
- There are concerns with a persons privacy

**Magnetic Stripe Reader**
- Used at EFTPOS terminals
- Used at ATMs to obtain cash
- Used in retail stores for bill payments
- Card fraud reduced significantly as a PIN is used - not a signature
- PIN checking is computerised - risks of human error are eliminated
- The PIN is something else the customer must remember
- Transaction process for chip and PIN payment is less time consuming
- The PIN is compared with that stored in the chip
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  - Bank code / Sort code
  - Branch code
  - Customer code / Account number / Card number
  - Expiry date
  - Verification/security number
  - Credit limit
  - Info stored on card
  - Personal Identity Number
  - Customer name
  - Used at EFTPOS terminals
  - Used in ATM (cash machines)
  - Used in libraries to read borrower numbers

**MICR**
- Magnetic Ink Character Recognition/Reader
- Used by Banks to process & read cheques
- Uses special magnetic ironised ink
- Has it's numbers written on bottom of cheque
- Hard to forge/copy Adv of...
- Equipment very expensive Disadv of...
- Bar code labels can be damaged (flimsy)
- Plastic covering over bar code hinders reading

**Categorisation**
- Supermarkets
- Library's
- Shops
- Identity cards
- Electronic key cards
- Credit/Debit cards
- Credit limit
- Personal Identity Number
- Customer name
- Start date
- Date of issue
- Bank code / Sort code
- Branch code
- Customer code / Account number / Card number
- Expiry date
- Verification/security number
- Credit limit
- Info stored on card
- Info NOT stored on card

**Uses**
- Used in supermarkets
- Used in library's
- Used in shops
- Used at EFTPOS terminals
- Used in ATMs to obtain cash
- Used in retail stores for bill payments
- Used in automatic registration systems
- Used in libraries to read borrower numbers

**Advantages**
- Supermarkets
- Library's
- Shops
- Bar code labels can be damaged (flimsy)
- Plastic covering over bar code hinders reading
- Equipment very expensive
- Bar code labels can be damaged (flimsy)
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**Disadvantages**
- Supermarkets
- Library's
- Shops
- Bar code labels can be damaged (flimsy)
- Plastic covering over bar code hinders reading
- Equipment very expensive
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**Other Uses**
- Used at EFTPOS terminals
- Used in ATMs to obtain cash
- Used in retail stores for bill payments
- Used in automatic registration systems
- Used in libraries to read borrower numbers

**Process**
- The card is inserted into the reader
- Computer reads data on stripe
- Holds small amount of data
- Robust: Sturdy and strong in form than bar codes
- Easy to copy/forge
- Smart cards (chip replaced magnetic stripe)
- Start date
- Date of issue
- Bank code / Sort code
- Branch code
- Customer code / Account number / Card number
- Expiry date
- Verification/security number
- Credit limit
- Info stored on card
- Info NOT stored on card
- Personal Identity Number
- Customer name
- Used at EFTPOS terminals
- Used in ATM (cash machines)
- Used in libraries to read borrower numbers

**Additional Information**
- Start date
- Date of issue
- Bank code / Sort code
- Branch code
- Customer code / Account number / Card number
- Expiry date
- Verification/security number
- Credit limit
- Info stored on card
- Info NOT stored on card
- Personal Identity Number
- Customer name
- Used at EFTPOS terminals
- Used in ATM (cash machines)
- Used in libraries to read borrower numbers

**Summary**
- **Barcode Reader** (Scanner)
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**Company**
- www.mryusuf.com