

Selection statements

Selection statements are used when a program needs to **make a decision**.

- **If statement**
Used when something should happen only if a condition is true.
Example:
If a student's marks are above 50, the program prints "**Pass**".
- **If-else statement**
Used when the program must choose between two options.
Example:
If it is raining, the program prints "**Carry an umbrella**", otherwise it prints "**Enjoy the day**".
- **If-else if-else statement**
Used when there are several conditions.
Example:
If marks are 80 and above, give grade A;
if they are 60 and above, give grade B;
otherwise give grade C.
- **Switch statement**
Used when there are many fixed choices.
Example:
If the user enters 1, show "Deposit";
if 2, show "Withdraw";
if 3, show "Exit".

Iteration statements

Iteration statements are used when a program needs to **repeat an action**.

- **For loop**
Used when the number of repetitions is known.
Example:
Print numbers from 1 to 10.
- **While loop**
Used when repetition depends on a condition.
Example:
Keep asking for a password until the correct one is entered.
- **Do-while loop**
Used when an action must happen at least once.

Example:

Display a menu at least once and repeat until the user chooses "Exit".

Conclusion

Selection statements help a program **choose what to do**, while iteration statements help it **repeat tasks** until a condition is met.