

Abstract class:-

- i) Supports single inheritance only.
- ii) Contain abstract methods.
- iii) Can contain concrete methods.
- iv) Can contain instance variables and constructors.

Limitation: Do not support multiple inheritance

Interface:

- i) Supports multiple inheritance.
- ii) Contains abstract methods.
- iii) Contains constants.
- iv) Also contains default and static methods.
- v) No constructors or instance variables.

Advantage: Allows a class to inherit behaviour from multiple sources, enabling flexible design.

□ When to use abstract class:-

- i) When classes are closely related.
- ii) When you need to share code, state or constructors.
- iii) When partial implementation is required.

□ When to use interface:-

- i) When multiple inheritance is needed.
- ii) When defining capabilities or roles.
- iii) When classes are unrelated but share common behaviour.
- iv) When loose coupling is required.