1. **What are the errors that arise while implementing the algorithm?**

Algorithm is the step-to-step process having well defined instructions and finite sequence of steps to solve a particular problem.

While implementing the Algorithm different errors might arise. Some of them are as follows;

  i. Completeness

  It should find the solution of a problem if it can be solved.

  ii. Time complexity

  The number of nodes expanded should be measured.

  iii. Space Complexity

  Using maximum number of nodes in memory at a time.

  iv. Optimality

  Finding the solution with the minimum cost.

2. **What is API? Why it is important in effective programming? Explain the implementation procedure of API in programming.**

API stands for Application Programming Interface. It is defined as an intermediate between any two different software applications. It is a medium where two applications talk to each other. API includes three elements; Procedures, Protocols and Tools.

API are important for many purposes. In simple words, without API we cannot access many data that are needed for the program. Every specific program has their own API like amazon has its own, google maps has its own and many more. Some of the important of API are as follows.:

  i. Integration with other systems and data

  ii. Take Control over others interface

  iii. To engage your customers and vendors

  iv. Exchange of data

The implementation procedure of an API in programming;

i.   Choosing the type of API,

Single purpose API or multi-purpose, choose which API to adopt for the program.

ii.   Defining and API,

To define and create an API, it needs API Blueprints and MSON (Markdown Syntax for Object Notation).

iii. Creating and publishing an API,

Use Oracle API platform to create and publish an API

iv.   Testing,

Verify API endpoints.