Describe the 3 modes that hadoop can be run in. ( 6 marks) For each mode provide an example of when you would want to use this mode (6 marks)

The three modes that Hadoop can be run in are the following….

1. Standalone Mode - Standalone mode is the default mode in which Hadoop runs. Standalone mode is mainly used for debugging purposes. You can use input and output both as a local file system in standalone mode. Standalone mode is usually the fastest Hadoop modes as it uses your local file system for all the input and output functionality. An Example of when you would use Standalone Mode would be when you’re doing some testing/debugging
2. Pseudo Distributed Mode – Pseudo Distributed Mode also known as a single node cluster is when both name node and data node will be located on a single machine. In pseudo-distributed mode, all the Hadoop daemons will be running on a single node. An example of where you would want to use Pseudo Distributed Mode would be when we want to run different Java processes at once.
3. Distributed Mode – Distributed Mode is important mode in Hadoop as it allows multiple nodes to be ran at once. An example of when you would want to use Distributed Mode would be when you want to process large amounts of data in parallel across a cluster of machines.