Characteristics of an Algorithm

| Input | Zero or more quantities to be supplied. |
|---------------|--|
| Output | At least one quantity is produced. |
| Finiteness | Algorithms must terminate after finite number of |
| | steps. |
| Definiteness | All operations should be well defined. For example |
| | operations involving |
| | division by zero or taking square root for negative |
| | number are unacceptable. |
| Effectiveness | Every instruction must be carried out effectively. |
| Correctness | The algorithms should be error free. |
| Simplicity | Easy to implement. |
| Unambiguous | Algorithm should be clear and unambiguous. Each |
| | of its steps and their |
| | Inputs/outputs should be clear and must lead to only |
| | one meaning. |
| Feasibility | Should be feasible with the available resources. |
| Portable | An algorithm should be generic, independent of any |
| | programming |
| | Language or an operating system able to handle all |
| | range of inputs. |
| Independent | An algorithm should have step-by-step directions, |
| | which should be independent of any programming |
| | code |