**Project Management Exercise**

S M Construction has been awarded a contract to build a new manufacturing plant just outside Cardiff. The activity on arrow table below gives data on the activities involved in the plant’s construction.

The total cost in completing the project in normal time is £2 million, excluding site overheads which are £8000 per week.

**Table of Activities**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Normal time (weeks)** | **Shortest time (weeks)** | **Reduction costs (per week)** |
| 1-2 | 6 | 4 | £7000 |
| 1-3 | 8 | 4 | £8000 |
| 1-4 | 5 | 3 | £3000 |
| 2-4 | 6 | 3 | £5000 |
| 2-5 | 5 | 3 | £4000 |
| 3-6 | 10 | 8 | £15,000 |
| 4-6 | 8 | 5 | £6000 |
| 5-6 | 6 | 6 | - |

The board of directors of the company have asked you to produce a precedence (activity on node) diagram and to determine the following:

1. The critical path using normal times, the project’s total duration and the total cost of completing the project.
2. The shortest time in which the project can be completed and the associated costs.
3. The lowest cost for which the project can be completed and the corresponding time.

All charts and derives costs, table etc. should be made available to the Board for inspection.

Critically appraise the use of appropriate project management software in carrying out this exercise.

What other software could you use to perform this exercise?