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Exercise 7, Project Management

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Activity | Optimistic time () | Most likely time () | Pessimistic time () | Target date () | Expected time () | Standard deviation () |
| A | 8 | 10 | 12 | - | 10 | 0,67 |
| B | 10 | 15 | 20 | - | 15 | 1,67 |
| C | 5 | 7 | 9 | 30 | 7 | 0,67 |
| D | 8 | 10 | 12 | - | 10 | 0,67 |
| E | 3 | 6 | 9 | 40 | 6 | 1,00 |

Critical activities are A -> B -> C -> E, because this path may not be postponed in order to achieve C’s deadline in week 30. In fact the activities have to run in less than *most likely time* in order to fulfill the deadline. Furthermore activity D has a float of around 22 days based on the *expected time* and is therefore totally uncritical.

**5**

**4**

**3**

-

**1**

-

**2**

-

30

40

**A**

**B**

**D**

**C**

**E**

|  |  |  |
| --- | --- | --- |
| Project event | z-value () | Probability |
| 1 | - | - |
| 2 | - | - |
| 3 | - | - |
| 4 | -1,04 | 85% |
| 5 | 0,92 | 17% |

The critical path until activity C may be run on time with a chance of only 15%, meaning that 17 out of 20 project runs will fail C’s deadline.

The overall project may, on the other hand, be run on time with a probability of 83%. This means that *more than* 4 out of 5 project (4,15 projects) runs will complete successfully.

