Instituto Tecnológico de Costa Rica

Escuela de Computación

Campus Tecnológico Local San José

IC4810 – Administración de proyectos

Laboratorio métricas.

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1. You have a project to be completed in 12 months and the cost of the project is $100,000. Six months have passed and $80,000 has been spent, but on closer review, you find that only 60% of the work has been completed so far. Find the Schedule Performance Index and deduce whether the project is behind or ahead of schedule. (15pts)

    a. Actual Cost (AC) = $80 000

    b. Planned Value (PV) = 50% of $100 000 = $50 000

    c. Earned Value (EV) = 60% of $100 000 = $60 000

    d. SPI = EV/PV = 60 000 / 50 000 = 1.2

    e. The project is ahead of schedule

2. You have a project to be completed in 12 months and the cost of the project is $100,000. Six months have passed and $80,000 has been spent, but on closer review, you find that only 60% of the work has been completed so far. Find the Cost Performance Index for this project and deduce whether you are under budget or over budget. (15pts)

    a. Actual Cost (AC) = $80 000

    b. Planned Value (PV) = 50% of $100 000 = $50 000

    c. Earned Value (EV) = 60% of $100 000 = $60 000

    d. CPI = EV/AC = 60 000 / 80 000 = 0.75

    e. The project is over budget

3. You have a project to be completed in 18months and the cost of the project is $520,000. Eightmonths have passed and $200,000 has been spent, but on closer review, you find that 30% of the work has been completed so far. Find the Schedule Performance Index and deduce whether the project is behind orahead of schedule. Find also the Cost Performance Index for this project and deduce whether you are under budget or over budget. (30 pts)

    a. Actual Cost (AC) = $200 000

    b. Planned Value (PV) = 44.44% of $520 000 = $231 088

    c. Earned Value (EV) = 30% of $520 000 = $156 000

    d. SPI = EV/PV = 156 000 / 231 088 = 0.68

    e. The project is behind of schedule

    f. CPI = EV/AC = 156 000 / 200 000 = 0.78

    g. The project is over budget

4. Describe a scenario where the indicators show a healthy project. (10 pts)

    a. You have a project to be completed in 10 months and the cost of the project is $500,000. Five months have passed and $200,000 has been spent, but on closer review, you find that 60% of the work has been completed so far.

    b. Actual Cost (AC) = $200 000

    c. Planned Value (PV) = 50% of $500 000 = $250 000

    d. Earned Value (EV) = 60% of $500 000 = $300 000

    e. SPI = EV/PV = 300 000 / 250 000 = 1.2

    f. The project is ahead of schedule

    g. CPI = EV/AC = 300 000 / 200 000 = 1.5

    h. The project is under budget

5. Describe a scenario where the indicators show an unhealthy project. (10 pts)

    a. You have a project to be completed in 10 months and the cost of the project is $500,000. Nine months have passed and $400,000 has been spent, but on closer review, you find that 20% of the work has been completed so far.

    b. Actual Cost (AC) = $400 000

    c. Planned Value (PV) = 90% of $500 000 = $450 000

    d. Earned Value (EV) = 20% of $500 000 = $100 000

    e. SPI = EV/PV = 100 000 / 450 000 = 0.22

    f. The project is behind of schedule

    g. CPI = EV/AC = 100 000 / 400 000 = 0.25

    h. The project is over budget

6. Describe in your own words the concept Schedule Variance. Give an example. (10 pts)

    a. Schedule Variance show us the difference between the Earn Value and the Planned Value, if the difference is positive, that is a good thing because it means that we are ahead of the schedule, but if the difference is negative is a bad thing because we are behind the schedule.

7. Describe in your own words the concept Cost Variance. Give an example. (10 pts)

    a. Cost Variance is the difference between the Earn Value and the Actual Value, if the difference is positive, that is a good thing because it means that we are under budget, but if the difference is negative is a bad thing because we are over budget.