1. Prepare and print a one-page cost model for the project described in the Running Case,

like the model provided in Figure 7-2. Use the following WBS, and be sure to document

your assumptions in preparing the cost model. Assume a labor rate of $100/hour for

the project manager and $60/hour for other project team members. Assume that none of

the work is outsourced, labor costs for users are not included, and there are no additional

hardware costs. The total estimate should be $200,000.

1. Project management

2. Requirements definition

3. Web site design

3.1 Registration for recreational programs

3.2 Registration for classes and programs

3.3 Tracking system

3.4 Incentive system

4. Web site development

4.1 Registration for recreational programs

4.2 Registration for classes and programs

4.3 Tracking system

4.4 Incentive system

5. Testing

6. Training, rollout, and support

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS Items** | **Units/Hrs.** | **Cost/Unit/Hr.** | **Subtotals in $** | **WBS Level 1 Totals** |
| 1. Project Management | 950 | 100 | 95000 | 95000 |
| 2. Requirements definition | 190 | 60 | 11400 | 11400 |
| 3. Web site design |  |  |  |  |
| 3.1 Registration for recreational programs | 175 | 60 | 10500 | 36000 |
| 3.2 Registration for classes and programs | 178 | 60 | 10680 |  |
| 3.3 Tracking system | 130 | 60 | 7800 |  |
| 3.4 Incentive system | 117 | 60 | 7020 |  |
| 4. Web site development |  |  |  | 40980 |
| 4.1 Registration for recreational programs | 210 | 60 | 12600 |  |
| 4.2 Registration for classes and programs | 230 | 60 | 13800 |  |
| 4.3 Tracking system | 140 | 60 | 8400 |  |
| 4.4 Incentive system | 103 | 60 | 6180 |  |
| 5. Testing | 160 | 60 | 9600 | 9600 |
| 6. Training, rollout, and support | 117 | 60 | 7020 | 7020 |
|  |  |  | 200000 | 200000 |

1. Using the cost model you created in Task 1, prepare a cost baseline by allocating the costs by WBS for each month of the project.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **WBS Items** | Feb | Mar | Apr | May | Jun | Jul | Total |
| 1. Project Management | 15,833 | 15,833 | 15,833 | 15,833 | 15,833 | 15,835 | 95,000 |
| 2. Requirements definition | 11,400 |  |  |  |  |  | 11,400 |
| 3. Web site design |  |  |  |  |  |  |  |
| 3.1 Registration for recreational programs |  | 3500 | 3500 | 3500 |  |  | 10,500 |
| 3.2 Registration for classes and programs |  | 3560 | 3560 | 3560 |  |  | 10,680 |
| 3.3 Tracking system |  | 2600 | 2600 | 2600 |  |  | 7,800 |
| 3.4 Incentive system |  | 2340 | 2340 | 2340 |  |  | 7,020 |
| 4. Web site development |  |  |  |  |  |  |  |
| 4.1 Registration for recreational programs |  |  |  | 4200 | 4200 | 4200 | 12,600 |
| 4.2 Registration for classes and programs |  |  |  | 4600 | 4600 | 4600 | 13,800 |
| 4.3 Tracking system |  |  |  | 2800 | 2800 | 2800 | 8,400 |
| 4.4 Incentive system |  |  |  | 2060 | 2060 | 2060 | 6,180 |
| 5. Testing |  |  |  |  |  | 9600 | 9,600 |
| 6. Training, rollout, and support |  |  |  |  |  | 7020 | 7,020 |
|  |  |  |  |  |  |  | 200,000 |

3. Assume that you have completed three months of the project. The BAC was $200,000 for

this six-month project. You can also make the following assumptions:

PV ¼ $120,000

EV ¼ $100,000

AC ¼ $90,000

a. What is the cost variance, schedule variance, cost performance index (CPI), and

schedule performance index (SPI) for the project?

Cost Variance =

earned value (EV) - actual cost (AC)

EV-AC = **$10,000**

Schedule Variance =

earned value (EV) - planned value (PV)

EV-PV = **$20,000**

Cost Performance Index =

earned value (EV) / actual cost (AC)

EV/AC = **111.111%**

Schedule Performance Index =

earned value (EV) / planned value (PV)

EV/PV = **83.333%**

b. How is the project doing? Is it ahead of schedule or behind schedule? Is it under budget

or over budget?

**Per the projected values the project is behind the Schedule and approximately take 7.5 months to get completed instead of 6 months, also the project Budget is under than that of the BAC (200000).**

c. Use the CPI to calculate the estimate at completion (EAC) for this project. Is the project

performing better or worse than planned?

AS per CPI to calculate the estimate at completion (EAC) for this project is

Planned Budget (BAC) / CPI

**200,000/111.111% = 1800.00(approx.)**

**Therefore, project is considering better than Planned.**

d. Use the SPI to estimate how long it will take to finish this project.

AS per SPI to calculate the estimate of Schedule for this project is

planned time / SPI

**6/0.83 = 7.2 Months**

e. Sketch an earned value chart using the preceding information. See Figure 7-5 as a

guide.

