Perfect IT Solutions is about to initiate a project that includes developing software for one of their clients. The project involves the following four phases: analysis, design, development, and implementation. The project is scheduled to start on 15 October.

The duration and precedence relationships (or sequencing) between the tasks of the project are provided in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Task Name** | **Task ID.** | **Immediate Predecessor** | **Time (days)** |
| Defining the scope of project | 1 |  | 5 |
| Analysing the existing system | 2 | 1 | 10 |
| Preparing the requirements document and a high-level design | 3 | 2 | 15 |
| Conducting a proof of concept to validate the approach | 4 | 3 | 7 |
| Signoff of requirements and a high-level design from the customer | 5 | 3 | 4 |
| Database design | 6 | 17,4 | 20 |
| Detailed program specifications | 7 | 5 | 30 |
| Detailed program design | 8 | 6,7 | 20 |
| Coding | 9 | 8 | 40 |
| Preparing test data | 10 | 8 | 10 |
| Unit testing of the programs | 11 | 9,10 | 40 |
| Integration testing | 12 | 11 | 15 |
| Preparing an installation and user manual | 13 | 5 | 30 |
| Installing software on a client computer | 14 | 18 | 5 |
| Acceptance testing | 15 | 12,14 | 10 |
| Getting client signoff | 16 | 13,15 | 0 |
| Training client’s development team | 17 | 1 | 15 |
| Installation of hardware at client site | 18 | 8 | 9 |

On the basis of this information, establish precedence relationships between tasks, set precedence relationships, and calculate the project duration using a project management software tool.

All Saturdays and Sundays are non-working days. Calculate the Saturdays and Sundays on the basis of the current calendar year. Additionally, the following are non-working days:

         30 November

         25 December

         28 December

         1 January

          4 January

         17 March

         2 April

         5 April

         3 May

         31 May

         12 July

The tasks involve the following individuals and expenses:

|  |  |  |
| --- | --- | --- |
| Defining the scope of the project | PM | PM: Project Manager |
| Analysing the existing system | BA | BA: Business Analyst |
| Identifying the requirements and creating a high-level design | PM, BA |  |
| Creating a proof of concept | CSE | CSE: Consulting Software Engineer |
| Procuring a signoff on requirements and the high-level design | Sponsor |  |
| Creating the database design | DBA | DBA: Database Analyst |
| Creating the detailed specs | BA |  |
| Creating a detailed program design | CSE |  |
| Coding | SE | SE: Software Engineer |
| Preparing the test data | TE | TE: Test Engineer |
| Performing a unit test | SE |  |
| Performing an integration test | SE, TE, CSE, QA | QA: Quality Assurance |
| Creating manuals | W | W: Writer |
| Installing software on the client computer | CSE, Travel 15 | Travel 15: €1,350.00 for travel and per day |
| Performing acceptance testing | TE, PM, Travel 16 | Travel 16: €2,700.00 for travel and per day |
| Procuring client signoff | PM |  |
| Training the client's team | CTrain, Travel 18 | CTrain: Client Trainer; Travel 18:€4,050.00 for travel and per day |
| Installing hardware at the client site | Tech, Travel 19 | Tech: Hardware Technician; Travel 19: €2,580.00 for travel and per day |

The hourly rates for each position are as follows:

|  |  |
| --- | --- |
| PM: Project Manager | €45.00 |
| BA: Business Analyst | €40.00 |
| CSE: Consulting Software Engineer | €45.00 |
| Sponsor | €55.00 |
| DBA: Database Analyst | €35.00 |
| SE: Software Engineer | €35.00 |
| TE: Test Engineer | €30.00 |
| QA: Quality Assurance | €25.00 |
| W: Writer | €25.00 |
| CTrain: Client Trainer | €30.00 |
| Tech: Hardware Technician | €35.00 |

What is the end date and total cost of the project?  
  
As the project proceeds, the actual duration (in days) for various tasks are shown:

|  |  |
| --- | --- |
| **Tasks** | **Actual** |
| Defining the scope of project | 6 |
| Analysing the existing system | 12 |
| Identifying the requirements and the high-level design | 17 |
| Creating a proof of concept | 5 |
| Procuring a signoff on requirements and the high-level design | 7 |
| Creating the database design | 23 |
| Creating the detailed specs | 33 |
| Creating a detailed program design | 22 |
| Prepare a test data | 10 |
| Creating manuals | 30 |
| Training the client's team | 15 |
| Installing hardware at the client site | 9 |

Produce a project summary report as of 15 March. In the report, identify the variance in duration, work, and cost between the planned and actual project progress. In addition, based on the following situations, provide answers to the specific questions:

1.       Assume that the project must be completed by the planned end date. Budget is not an issue. Additional personnel are available.

1.1 How can you get the project back on schedule?

2.       Assume that cost is the most important parameter because the project is being executed on a fixed-price contract.

2.1 Keeping the same staff, what is the anticipated cost and end date assuming the rest of the project goes according to plan?  
2.2 Use Earned Value Analysis to forecast the actual end date and cost. (**Note**: Value is earned when a task is completed.)  
2.3 Explain the difference between the answers for 2.1 and 2.2, if any.

*NOTE*

*Use the*[*template*](https://elearning.uol.ohecampus.com/bbcswebdav/pid-6887528-dt-content-rid-184445_4/xid-184445_4)*excel (attached) for submitting your answers.*

*Please make sure that you cite and reference all your outside sources properly, as per the Harvard Referencing System with in text citation.*

*1.       The assignment asks you to use the current year. In this project I want you to do this so use the year****2013 as the current year****. Therefore the project****starts in October of 2013****.*

*2.       Instead of attaching multiple files, just attach the****template****file and try****to cut and paste****into your report material from any other files.*

*3.       A little bit before the end of the assignment is a****link****to an Excel file (template) that you should put your answers into.*

*4.  1000 to 1500 words*