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1. **Overview** 
   1. **Project Summary** 
      1. **Purpose, scope, and objectives.** The object of this project is to develop a software product that will assist the university IT Department in making registration, course-student information bridge. The product will allow the user to view, display and submit information regarding the courses. The product will perform the required GPA calculation. The product will allow administrator to add, delete course-student info.
      2. **Assumptions and constraints.**  Constraints include the following:
         * + The deadline must be met.
           + The architecture must be open to add new functionality
           + The product must be reliable.
           + The product must check validation database
           + The product must be user‐friendly.
      3. **Project deliverables.**  The complete product, including user manual, will be delivered 8 weeks after the project commences.
      4. **Schedule and budget summary.**  The duration, personnel requirements, and budget of each workflow are as follows:
         * Requirements workflow (1-week, two team members, $310)
         * Analysis workflow (2 weeks, two team members, $110)
         * Design workflow (2 weeks, two team members, $610)
         * Implementation workflow (2 weeks, three team members, $710)
         * Testing workflow (2 weeks, three team members, $410)
   2. **Evolution of the project management plan.**  All changes should be documented in order to keep the project management plan correct and up to date. All changes to the project management plan must be agreed by IT and CS department before they are implemented.
2. **Reference materials.**  All artifacts will conform to the university’s IT and server standards.
3. **Definitions and acronyms.**  The students are our user. IT and admission office are our client.
4. **Project organization**
   1. **External interfaces.** All the work on this project will be performed by Triet, Murtaza, Ahmet and Jacob. Al will meet weekly with the client to report progress and discuss possible changes and modifications.
   2. **Internal structure.** The team consist of Triet and Jacob.
   3. **Roles and responsibilities.**  Ahmet and Jacob will perform the design workflow. Triet will implement the class definitions and report artifacts, Murtaza will construct the artifacts to handle registration and addition a new student, and Jacob will develop the artifacts that handle courses. Each member is responsible for the quality of the artifacts he or she produces. Triet will oversee integration and the overall quality of the software product.
5. **Managerial process plans**
   1. **Start‐up plan**
      1. **Estimation plan.** As previously stated, the total development time is estimated to be 8 weeks. These figures were obtained by expert judgment by analogy, that is, by comparison with similar projects(Blackboard).
      2. **Staffing plan.**  Triet is needed for the entire 8 weeks, for the first 4 weeks in only a student capacity and the second 4 weeks as both manager and programmer. Murtaza and Jacob are needed for the first 3 weeks as systems analysis and designers, and Ahmet is needed for the last 5 weeks as programmers and testers.
      3. **Resource acquisition plan.**  All necessary hardware, software, and CASE tools for the project are already available online. The product will be delivered to UHD installed on a desktop computer that will be leased from our usual supplier.
      4. **Project staff training plan.** No additional staff training.
   2. **Work plan**
      1. **Work activities and Schedule allocation**

|  |  |
| --- | --- |
| Week 1 | (Completed) Met with client and determined requirements artifacts. Inspected requirements artifacts. |
| Weeks 2,3 | (Completed) Produced analysis artifacts and inspected analysis artifacts. Showed artifacts to client, who approved them. Produced SPMP, CRC. |
| Weeks 4,5 | Product design artifacts. |
| Weeks 6‐8 | Testing Case, Inspection of each class. Documentation inspection. |

* + 1. **Resource allocation.**  The four team members will work separately on their assigned artifacts such as UML Diagram. Team members will meet at the end of each week and discuss problems and progress. Murtaza will ensure that schedule and project requirements are met. Minimizing faults and maximizing user-friendliness will be the team’s top priorities. Triet has overall responsibility for all documentation and has to ensure that it is up to date.

5.2.3 **Budget allocation.**  The budget for each workflow is as follows:

|  |  |
| --- | --- |
| Requirements workflow | $310 |
| Analysis workflow | $110 |
| Design workflow | $610 |
| Implementation workflow | $710 |
| Testing workflow | $410 |
| **Total** | **$2,150** |

* 1. **Control plan**

Any major changes that affect the milestones or the budget have to be approved by our team members and documented. No outside quality assurance student are involved. The benefits of having someone other than the individual who carried out the development do the testing will be accomplished by each person testing another person’s work products.

Our team will be responsible for ensuring that the project is completed on time. This will be accomplished through weekly meetings with the team members. At each meeting, Triet and Ahmet will present the week’s progress and problems. Our team will determine whether they are progressing as expected and whether they are following the specification document and the project management plan. Any major problems faced by the team members will immediately be reported to the team management.

* 1. **Risk management plan**

The risk factors and the tracking mechanisms are as follows.

The project should be subjected to extensive testing.

The client is assumed to be inexperienced with computers. Therefore, special attention should be paid to the analysis workflow and communication with the client. The project has to be made as user‐friendly as possible.

Because of the ever‐present possibility of a major design fault, extensive testing will be performed during the design workflow. Also, each of the team members will initially test his or her own login and then test the code of another member. Our team will be responsible for integration testing and in charge of project testing.

The information must meet the specified user requirements and response times. This should not be a major problem because of using wrong username and password of the project, but it will be monitored by our team throughout development.

If there is a fault in the compiler, it will be replaced.

5.5 **Project close‐out plan.** Not applicable here.

1. **Technical process plans**
   1. **Process model.** The Unified Process will be used.
   2. **Methods, tools, and techniques.** The workflows will be performed in accordance with the Unified Process. The project will be implemented in Visual Basic.
   3. **Infrastructure plan.** The product will be developed using our team’s UML diagram running under Macintosh on a personal computer.
   4. **Product acceptance plan.** Acceptance of the project by our team members will be achieved by following the steps of the Unified Process.
2. **Supporting process plans**
   1. **Configuration management plan.** Blackboard system will be used throughout for all artifacts.
   2. **Testing plan –** The testing workflow of the Unified Process will be performed.
   3. **Documentation plan –** Documentation will be produced as specified in the Unified Process.
   4. **Quality assurance plan.** The team members tested the project under our circumstances and it capable for the testing standards.
   5. **Reviews and audits plan.** Ahmet and Jacob will test each other’s code, and Triet will conduct integration testing. Extensive product testing will then be performed by all three.
   6. **Problem resolution plan –** Any major problems faced by the team members will immediately be reported to our team management.
   7. **Subcontractor management plan.** Not applicable here.
   8. **Process improvement plan.** All activities will be conducted in accord with the our team plan to advance from beginner to intermediate level in a few months.
3. **Additional plans.** Additional components:

**Security:** A username and password will be needed to use the project.

**Training:** Training will be performed by our team at time of delivery. Because the project is straight forward to use, a few minutes should be sufficient for training. Our team will answer questions without any charge.

**Maintenance:** Corrective maintenance will be performed by the team at no cost. If it happens something with the project, the clients feel free to ask questions any time.