**SOFTWARE PPROJECT MANAGEMENT**

**LAB FILE**



**Submitted by-**

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7CSE-9

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**AMITY UNIVERSITY**

**NOIDA, UTTAR PRADESH**

**2021-2022**

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| **S. No** | **Experiment** | **Assigned Date** | **Submission Date** | **Remarks and Signature** |
| **1.** | Getting Familiar with Project Libre. | 20-07-2021 | 27-07-2021 |  |
| **2.** | Creating a new project with task name, duration, start and finish date | 20-07-2021 | 27-07-2021 |  |
| **3.** | Create a new project with task name, duration, start and finish date along with predecessors. | 27-07-2021 | 03-08-2021 |  |
| **4.** | Create a new project with task name, duration, start and finish date along with predecessor and resource name to tasks. | 03-08-2021 | 10-08-2021 |  |
| **5.** | Draw the Gantt chart for the software project. | 10-08-2021 | 17-08-2021 |  |
| **6.** | Using Project Planning Activities draw the PERT for the project. | 17-08-2021 | 24-08-2021 |  |
| **7.** | Activity – tam work duration | 24-08-2021 | 31-08-2021 |  |
| **8.** | Activity – tam work duration | 31-08-2021 | 7-09-2021 |  |
| **9.** | Activity – tam work duration | 14-09-2021 | 21-09-2021 |  |
| **10.** | Work Breakdown Structure | 28-09-2021 | 4-10-2021 |  |

**EXPERIMENT -1**

**Introduction to ProjectLibre**

ProjectLibre is an open source project management software solution developed as an alternative to Microsoft Project. As with other project management tools, ProjectLibre maintains a list of tasks for users and automatically organizes and tracks tasks and projects as progress is made or they’re completed.

ProjectLibre is designed to complement the [LibreOffice](https://www.webopedia.com/definitions/libreoffice/) and OpenOffice open source office suites, providing project managers and team leaders with a complete collection of productivity tools. In addition to the standard ProjectLibre software, cloud and server versions of ProjectLibre are in development and are expected to become available in 2014.

**Features, Benefits, Product Strengths**

* **MS Project Compatibility** – ProjectLibre is compatible with Microsoft Project 2003, 2007, and 2010, so it will open these files. It also has import/export capabilities. A similar ribbon UI allows users familiar with MS Project to easily transition to ProjectLibre. In creating a project plan, they can use a similar approach, such as listing and indenting a task list or work breakdown structure. They can set durations, links, predecessors, and resources in a similar manner. They can also create budgets and manage expenses with the software. The latest version is 1.8.0 modified in May 2018.
* **Core PM Functionality** – This open source alternative software includes features such as Gantt charts, network diagrams, work breakdown structure charts, resource breakdown structure charts, earned value costing, and resource histograms. These are also comparable to features in Microsoft Project. Users can set dependencies, create a project baseline, and use multiple calendar to define working and non-working days for different resources. It also has reporting functionality, such as for displaying project details, resource information, task information, and others.
* **Enterprise Cloud** – ProjectLibre is busy finalizing a cloud version. It will extend the open source desktop software to a cloud version that can be accessed anytime and anywhere. Unlike the single-user desktop version, the cloud version will be capable of handling multiple projects by multiple users. Thus, simple project portfolio management features will also be available. A team dashboard will allow project collaboration from members in different locations. Pricing will be offered on a simple monthly subscription.

**DIFFERENCE BETWEEN MS PROJECT AND PROJECTLIBRE**

|  |  |  |
| --- | --- | --- |
| Systems | **Microsoft Project**[**X**](https://project-management.zone/system/projectlibre) | **ProjectLibre**[**X**](https://project-management.zone/system/microsoft-project) |
| Description | Project planning and tracking tools available in various editions: Standard, Pro, Server and Online. | ProjectLibre is a Java-based open source desktop project management tool. |
| Category | Project Planning | Project Planning |
| [Project Management Zone Ranking](https://project-management.zone/ranking)  [Ranking Trend](https://project-management.zone/ranking/trend/system/microsoft-project,projectlibre) | Score 1,051.54 Rank #2 | Score 8.66 Rank #81 |
| Developer | Microsoft |  |
| Website | [microsoft.com/­microsoft-365/­project/­project-management-software](https://www.microsoft.com/microsoft-365/project/project-management-software) | [projectlibre.com](http://www.projectlibre.com/) |
| Initial release | 1984 | 2012 |
| License | Commercial Web-based service (SaaS) | Open Source |
| Web-based architecture | yes | no |
| Programming language |  | Java |
| Operating systems | Windows | Linux OS X Windows |

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| **Internal Assessment (Mandatory Experiment) Sheet for Lab Experiment Department of Computer Science & Engineering ASET, Amity University, Noida (U.P.)** | | | |
| Programme | B. Tech (CSE) | Course Name | Software Project Management |
| Course Code | CSE432 | Semester | 7 |
| Student Name | Madhur Gusain | Enrollment No. | A2305218572 |
| **Marking Criteria** | | | |
| **Criteria** | **Total Marks** | **Marks Obtained** | **Comments** |
| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 2**

**AIM-** create a new project in ProjectLibre

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

* Open ProjectLibre, click on new project button on the pop-up.
* Enter the basic details about the project which are essential for the creation of a new project.
* After you enter your project details you are ready to create your first task.
* As seen in the table above, type in the appropriate field, the task’s ‘Name‘, ‘Duration‘ and ‘Start‘ – the finish date is then calculated automatically.

**OUTPUT-**

Graphical user interface, application

Description automatically generated

**RESULT:** In this experiment, we have drawn a new Project and the result is shown inscreenshots.

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| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 3**

## **AIM-** Create a new project with task name, duration, start and finish date along with predecessors.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Following are the steps to draw a Gantt chart for a project:

1. Create various tasks of the project after gathering and analysing all the requirements.
2. In each task, create some more tasks and indent them to make them sub tasks. Now, the completion of a task will be marked by completion of all its sub tasks.
3. Provide the sub tasks with their duration start and end dates and other attributes.
4. Using the predecessor property, link the sub tasks to each other and to the main tasks.
5. After setting all these properties, the Gantt chart is ready. Go to the view menu, click on the Gantt chart and the following view will be displayed.

**OUTPUT-**

Graphical user interface, application, table

Description automatically generated

**RESULT:** In this experiment, we have drawn the required fields for a project and the result is shown inscreenshots.

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| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 4**

**AIM-** Create a new project with task name, duration, start and finish date along with predecessor and resource name to tasks.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Following are the steps to draw a Gantt chart for a project:

1. Open MS Project.
2. Create a new Blank Project
3. Go on Task Menu
4. In the task sheet double click on the task number column.
5. A pop up window will open. Give the properties of the task and start and end date as follows:

* **General**: In these properties like Name of the task, Schedule Mode, Start date, end date etc are given.
* **Predecessor**: In this step the predecessors of the current task are mentioned. The current task can start only when its predecessors are finished.
* **Resources:** In this step, the details of the resources involved in the task are given.

**OUTPUT-**

Table

Description automatically generated

**RESULT:** In this experiment, we have drawn the required fields with resource names for a project and the result is shown inscreenshots.

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| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 5**

**AIM-** Draw the Gantt chart for the software project.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Following are the steps to draw a Gantt chart for a project:

1. Create various tasks of the project after gathering and analysing all the requirements.
2. In each task, create some more tasks and indent them to make them sub tasks. Now, the completion of a task will be marked by completion of all its sub tasks.
3. Provide the sub tasks with their duration start and end dates and other attributes.
4. Using the predecessor property, link the sub tasks to each other and to the main tasks.
5. After setting all these properties, the Gantt chart is ready. Go to the view menu, click on the Gantt chart and the following view will be displayed.

**OUTPUT-**

A picture containing graphical user interface

Description automatically generated

**RESULT:** In this experiment, we have drawn the Gantt chart for a project and the result is shown inscreenshots.

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| Student Name | Madhur Gusain | Enrolment No. | A2305218572 |
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| **Criteria** | **Total Marks** | **Marks Obtained** | **Comments** |
| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 6**

**AIM-** Using Project Planning Activities draw the PERT for the project.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Steps to create a PERT chart are as follows:

1. Create various tasks of the project after gathering and analysing all the requirements.
2. In each task, create some more tasks and indent them to make them sub tasks. Now, the completion of a task will be marked by completion of all its sub tasks.
3. Provide the sub tasks with their duration start and end dates and other attributes.
4. Using the predecessor property, link the sub tasks to each other and to the main tasks.
5. Now that the PERT chart is ready, go to the view menu, click on the Network Diagram tab and the following PERT chart will be displayed.

**OUTPUT-**

Diagram

Description automatically generated

**RESULT:** In this experiment, we have drawn the PERT chart for a project and the result is shown inscreenshots.

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| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 7**

**AIM-** Tam works 8 hours per day from Monday - Friday; You set the Task Type as Fixed Duration. If you have task with 4 day duration and task has been scheduled for 32 hours.   
  
After you assign the task information as above, you realized that Tam will not available full time to work on this task. His availability is part time, he can work only 4 hours per day.   
  
When you changed his units to 50%, Project keeps the duration fixed at 4 days, and recalculates work to be 16 hours.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Steps to create are as follows:

1. You set the Task Type as Fixed Duration. If you have task with 4 day duration and task has been scheduled for 32 hours.   
     
   After you assign the task information as above, you realized that Tam will not available full time to work on this task. His availability is part time, he can work only 4 hours per day.   
     
   When you changed his units to 50%, Project keeps the duration

**OUTPUT-**

**Graphical user interface, application

Description automatically generated**

**RESULT:** In this experiment, we have updated the duration for a project and the result is shown inscreenshots.

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| Programme | B. Tech (CSE) | Course Name | Software Project Management |
| Course Code | CSE432 | Semester | 7 |
| Student Name | Madhur Gusain | Enrolment No. | A2305218572 |
| **Marking Criteria** | | | |
| **Criteria** | **Total Marks** | **Marks Obtained** | **Comments** |
| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 8**

**AIM** - Tam works 8 hours per day from Monday - Friday; You set the Task Type as Fixed Duration. If you have task with 4 day duration and task has been scheduled for 32 hours.   
  
If you increase the work to 80 hours; Project keeps the duration same and it increases the units to complete the work. See below example, Tam is now showing up with 250% units.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Following are the steps to draw a Gantt chart for a project:

1. Create various tasks of the project after gathering and analysing all the requirements.
2. In each task, create some more tasks and indent them to make them sub tasks. Now, the completion of a task will be marked by completion of all its sub tasks.
3. Provide the sub tasks with their duration start and end dates and other attributes.
4. Using the predecessor property, link the sub tasks to each other and to the main tasks.
5. After setting all these properties, the Gantt chart is ready. Go to the view menu, click on the Gantt chart and the following view will be displayed.

**OUTPUT-**

Before changing the work hours:-

Graphical user interface, application

Description automatically generated

After Changing the work hour to 80 hours by keeping same duration:

Graphical user interface, application, table, Excel

Description automatically generated

**RESULT:** In this experiment, we have updated the duration for a project and the result is shown inscreenshots.

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| Student Name | Madhur Gusain | Enrolment No. | A2305218572 |
| **Marking Criteria** | | | |
| **Criteria** | **Total Marks** | **Marks Obtained** | **Comments** |
| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 9**

**AIM** - Two painters are assigned full-time (100%) to paint the walls in 2 days (work equals 32 hours–16 hours per painter).

If you increase the duration of the task from 2 days to 4 days, Project sets each painter's assignment units to 50% so that each painter works only half-time and work remains constant at 32 hours.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Following are the steps to draw a Gantt chart for a project:

**Duration = Work ÷ Resource Units**

1. Set the task to Fixed Work when you want the amount of work to remain constant, regardless of any change in duration or resource units.
2. Remember, in Project, work is measured in time units, such as hours, and it is the amount of effort that a resource needs to complete a task. The total work for a task is the sum of all those time units, no matter how many resources are assigned to the task.

**OUTPUT-**

**2 days’ time given:**

**[Graphical user interface

Description automatically generated](https://as-prod.asyncgw.teams.microsoft.com/v1/objects/0-sa-d5-8756f2776d74f8ea2c1157864ccec7d3/views/imgo)**

**4 days’ time given:**

**[Graphical user interface, application

Description automatically generated](https://as-prod.asyncgw.teams.microsoft.com/v1/objects/0-sa-d8-8c4025f516c5ade0a91506152b9160d1/views/imgo)**

**RESULT:** In this experiment, we have updated the duration for a project and the result is shown inscreenshots.

|  |  |  |  |
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| **Marking Criteria** | | | |
| **Criteria** | **Total Marks** | **Marks Obtained** | **Comments** |
| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |

**EXPERIMENT 10**

**AIM** - Using project planning activities, draw the Work Breakdown Structure for the project.

**SOFTWARE USED-** ProjectLibre / MS Project

**THEORY-**

Following are the steps to draw a Gantt chart for a project:

**Duration = Work ÷ Resource Units**

1. Set the task to Fixed Work when you want the amount of work to remain constant, regardless of any change in duration or resource units.
2. Remember, in Project, work is measured in time units, such as hours, and it is the amount of effort that a resource needs to complete a task. The total work for a task is the sum of all those time units, no matter how many resources are assigned to the task.

**OUTPUT-**

**Graphical user interface, application

Description automatically generated**

**Diagram, schematic

Description automatically generated**

**RESULT:** In this experiment, we have drawn the Work Breakdown Structure and the result is shown inscreenshots.

|  |  |  |  |
| --- | --- | --- | --- |
| **Internal Assessment (Mandatory Experiment) Sheet for Lab Experiment Department of Computer Science & Engineering ASET, Amity University, Noida (U.P.)** | | | |
| Programme | B. Tech (CSE) | Course Name | Software Project Management |
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| Student Name | Madhur Gusain | Enrolment No. | A2305218572 |
| **Marking Criteria** | | | |
| **Criteria** | **Total Marks** | **Marks Obtained** | **Comments** |
| Concept (A) | 2 |  |  |
| Implementation (B) | 2 |  |  |
| Performance (C) | 2 |  |  |
| Total | 6 |  |  |