# Letter of Transmittal

12th April 2021

Rosy Chapman

The Granite Belt Art and Craft Trail

Dear Rosy

Hope that the website rebuilding process would be working out well. We actually read the project brief, and we are hopeful that a new ICT system with up-to-date facilities and requirements would certainly help the business operations of the company. Based on the requirements of the ticketing system, where users would not be prompt to write their data, again and again, this proposal will clarify the problems that the system can face and what are the solutions to it.

Based on the business need of Granite Belt Art, the new ICT infrastructure must be able to process centralized communication, facilitate COVID tracking of the guests and facilitate ticket booking. This proposal has suggested the use of Node Javascript and React for building the ICT system. The application would be able to track the guests at different locations, and they do not have to fill in the details again and again.

The proposal also briefs about the proposed application benefits to the organization and how through an effective customer database tool, the organization can effectively handle the new applicants. I hope that you go through the project proposal and accept the idea of the new ICT infrastructure.

Thank you very much.

Regards

Abhishek Rangineni

Chiranjivi Neupane

Dipen Navnitbhai Patel

Nikhil Peter



**CIS8501: Applied Information Systems Research Project**

**Assessment 1**

**Granite Belt Art and Craft Trail ICT Overall Redesign Project**

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# Executive Summary

The Granite Belt Art and Craft is an art and craft organization that organizes various trails and events. Different artists present their arts, and interested people visit the trails at different venues. The traditional web ticketing system is not fulfilling the requirements of the customers. The problem is discussed, and the analysis is done based on which a new web ticketing system is developed, which makes ticket booking easy and efficient, and user-friendly. The project basically will offer assistance make strides the involvement of the participants of the occasion by completing the booking prepare simple and accessibility of online booking concurring to their comfort.

The purpose of the report is to find out a suitable solution for the ICT infrastructure that Granite Belt Art and Craft can deploy for effective ticketing and Covid-tracking system. Based on the analysis of the requirements, i.e., the visitors, when using this application, should not be prompted to enter data again and again. The previous WordPress website is being stripped, and therefore, the new application must be reliable and flexible. It should not be complex as WordPress, which uses so many plugins to provide the features required.

The report will suggest the use of Node JS and React for building the application. This solution has been recommended for the new ICT system. This redesign would be tough, but at last, it would fulfill the business requirements.

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# Project Background

The Granite Belt Art and Craft is a community that organizes various art events at multiple venues. It is currently located in Stanthorpe, Queensland. Various artists locally and globally participate in the exhibitions at galleries and studios at different community spaces. The self-driving tales allow the opportunity to indulge in the attractive landscapes around the granite belt and Stanthorpe, including wineries and national parks. Interested peoples who want to attend or join the event can go to the Granite Belt Art and Craft website’s official website lookout for the important dates and get to know about the events that will be held, and book their seats on their website.

## Briefing of the project

Earlier, Granite Belt Art and Craft was using WordPress and its plugins as a platform for its website. But, it was making it tedious, and all the plugins were making it complex. So, the company decided to strip WordPress and redesign the ICT infrastructure.

In the current time of the pandemic of COVID-19, the tracking facility to track whether a person is in contact with any of the infected person to avoid the risk to other participants and peoples going to attend the event. The ticketing process is not that advanced, so the ticket can be validated at different event users’ venues to enter the details of their participation at every venue to get allowed. The option of booking seats is available for only a single person can be resolved by creating an advanced ticketing system that will take care of all attendees’ requirements and reduce the problems faced during booking their seats for the event (Celuch, 2020).

The project mainly will help improve the experience of the attendees of the event by making the booking process easy and availability of online booking according to their convenience (Celuch, 2020).

The new ICT infrastructure, along with the ticket booking and COVID-tracking, must also present a centralized and customized customer database management tool, which would help them to keep track of the visitors and would help them to manage the users on the website as well as visitors attending the events. It should help them to negate the manual work of handling inquiries, emails and messages. It should provide a customized system to the Granite Belt staff so that they could handle inquiries and everything from the system only. It would increase the customer experience and help the staff manage the events and ticket booking process smoothly.

## Technology that the new project can use

The new ICT infrastructure must be built on a technology that suits the business requirements of the company. The system must also be secure and reliable. The system must be scalable in terms of platform. The application or system should be able to handle enormous data.

Therefore, it is suggested that the use of frontend and backend development programming languages be considered. The use of programming languages increases the efficiency of the application and helps in providing customized features. Therefore, the new ICT system could be based on Node Javascript and React and can use it as a technology to move further.

# Purpose of the app

The project’s main goal is to redevelop the web application using WordPress and many different plugins to improve the management of the booking by attendees of the events by Granite Belt Art and Craft, making all the booking facilities available for hassle-free bookings.

## What are the current problems that need to be addressed?

The current problems that need to be addressed are as follows:

* The users are prompted to enter their data again and again while booking the tickets.
* There is no COVID-tracking on the visitors, which is essential in these current situations.
* WordPress has so many plugins, which just makes it complex. Installation, activation and customization of the plugins just make the application slow and complex.
* There is no proper database to handle the customer data and manage it as a whole.
* The staff has to do manual inquiry handling. They have to respond manually to calls, messages, emails etc. This is very tedious and time-taking. It lowers the efficiency of the staff and increases costs.

## The purpose of the project

The purpose of the project is to redesign the ICT system of Granite Belt Art and Craft to manage the ticketing, covid tracking, colorful generation of tickets and effective customer database management.

## Benefits of the app to Granite Belt

* The new ICT app would be able to facilitate business operations.
* It would draw more visitors to the event. Thus, increasing its revenue.
* The application would be hassle-free and could be used by visitors. The application backend could be used by staff to properly manage the event.
* It would increase the efficiency of the staff as well as visitors.

# Proposed Solution

To provide the better provisioning of ticketing services, their old online web booking system needs to be replaced with cloud-based ticketing services to optimize the communication of the attending audience of Granite Belt Art and Craft. The online cloud ticketing system will improve ticketing efficiency and make the trails safe for the artists and attendees.

## The solution

The latest ticketing system must provide the following functionalities. It should include two panels, one for users and the other for the Granite Belt Art and Craft, to manage the events digitally without any physical hassle (Zongo and NASSE, 2020).

**User Panel**

* **User Registration and Log-in portal:** The first step for using the web portal for booking tickets online is user registration. The user’s registration requires the user’s basic information like name, contact details, address, and email details. After successful registration, the user has to login to the portal for booking and payment.
* **Location Selection:** The users have to enable the location, which can be completed via GPS. This functionality will help the Granite Belt Art and Craft track the user’s COVID details, whether there is any other infected person or not, with the help of third-party apps that can track the nearby infected with the use of Bluetooth technology. The user will not be able to go to the home screen if location service is disabled to maintain the safety measures.
* **Event list:** On this page, all the events to be organized are featured. The individuals interested can sort by price, category, dates, timings, offers, etc.
* **Booking:** The booking after selection is easy. The user has to click on the book ticket icon. The further steps are very easy.
* **Booking Screen:** On this screen, the users can select the dates and timings of the event they want to book tickets are selected, choosing venues and price of the tickets are also listed.
* **Barcode Generation and Ticket details:** After the payment is made, the barcode is generated with the ticket details. The barcode can be saved by the user, scanned by the barcode scanners at the venues of trails and events by Granite Belt Art and Craft (Zongo and NASSE 2020).

**Granite Belt Art and Craft Administration Panel:**

* **Administrator login**: The Granite Belt Art and Craft admin can log in to the admin panel by entering the credentials and can manage the events organized by them.
* **Dashboard:** On the dashboard, all the events, galleries, trails, performances, activities, and wineries information are available.
* **Management:** Management of events and shows are done on this portal.
* **User management:** All the registered users on the ticketing platform can be controlled on this platform.
* **Customer and Booking Management:** This portal manages the bookings of events and art performances that are booked by the customer.
* **Notify:** Regular notifications to be sent regarding the upcoming activities and events for the customers’ optimal participation (Li et al., 2018).

**24\*7 Support**

* The support services for the ticketing system users to resolve issues regarding updating tickets, cancellation of the booking, and other assistance related to ticket information.

**Feedback Forms:**

* The feedback functionality for feedback from the attendees and people participating in the Granite Belt Art and Craft events and trails. To analyze and update their services according to the reviews and feedback by the peoples.

## Intrinsic benefits from the new ICT application

* Using a proper database, such as Mongo DB that will update online bookings to avoid selling the same tickets, will contribute to better customer data management. This will help the organization reduce cost as online booking will lessen the need for many employees to handle the booking management.
* This proposed ticketing system will keep the operations user-friendly. The proposed web application will create a self-service system, and users will not have to depend physically on the organization for their bookings (Li et al., 2018).
* The communication will also be more effective as the users can use various social media platforms like Facebook, Instagram, Twitter, etc., to communicate directly with the organization and get the authorized information. The inquiry handling would be automatic and will require staff only at end-points. This will increase staff efficiency and enable a smooth customer experience.
* The safety of the peoples attending the events is also a major concern. The development will be done so that the tracking of COVID can be done to reduce the lifetime risk and create a health or risk-free environment. People don’t have to worry about the safety measures and can enjoy and have a great experience in the trails by Granite Belt Art and Craft (Li et al., 2018).

# Project schedule

While developing any software or web application scheduling, the project is an essential step in which documentation and analysis are done to fulfill the communication requirements about the projects’ start and finish.

The following steps need to be followed to the scheduling framework to understand any project better (Li et al., 2018).

1. **Task Definition:** In complex and large development projects, there is a need to break the activities involved into smaller parts for easy management and efficient development. In simple projects, only the activity list is needed because of the involvement of small developing teams.
2. **Timeline creation:** A time-based graphical representation of activities involved in the overall development of a software project. Gantt chart is used to show the overlap in timings. According to the timeline created is logically followed.
3. **Establishing Milestones:** To review the progress checkpoints are created, milestones are created. Phases of projects are examined by setting milestones.
4. **Applying Calendar dates:** Plan the starting and other dates of the project by overlaying the calendar dates.
5. **Resource allocation**: The needed resources are required for each task. After assigning types of equipment, office space, supplies to tasks. Allocating and securing required resources ensures that teams have proper tools and space to complete their task at the scheduled time.
6. **Iteration and update of Project Schedule**: In this step, the project schedule must be reviewed by the stakeholders and teams before starting the project. In this phase, many project teams face problems that can change the time taken to complete the task. The revised calendar is shared with the teams.

## Defining Milestones

**Milestone:** The listing of significant events involved in the project’s total duration is used to analyze and evaluate the progress of the development process that is defined at the starting of the project. When any process or steps fail to meet the plan, the management takes corrective actions.

Table : Milestones

|  |  |  |
| --- | --- | --- |
| Key milestones | Start Date | End Date |
| Starting phase of Developing new ticketing system for Granite Belt Art and Craft completed. | Fri 26/03/21 | Fri 26/03/21 |
| Analysis of old ticketing system. | Mon 19/04/21 | Mon 19/04/21 |
| Requirement Elicitation | Thu 17/06/21 | Thu 17/06/21 |
| Planning of project complete | Wed 21/07/21 | Wed 21/07/21 |
| Coding and development of new ticketing system completed. | Thu 9/12/21 | Thu 9/12/21 |
| Testing completed | Thu 13/01/22 | Fri 14/01/22 |
| Implementation is done | Mon 7/02/22 | Mon 7/02/22 |

## List of Tasks and subtasks (WBS)

**Work Breakdown Structure**

The Work Breakdown Structure (WBS) could be a commonly utilized venture administration apparatus that makes a difference venture groups get a handle on the different sorts of work required to total a venture. WBS gives the fundamental outline of work which you may extend as you start to track person errands, assets, and timelines, milestones.

Table : Work Breakdown Structure

|  |  |  |
| --- | --- | --- |
| WBS | Task Name | Duration |
| 0 | **Project1** | **240 days** |
| 1 | **Current System Analysis** | **15 days** |
| 1.1 | Review the documentation of traditional system | 3 days |
| 1.2 | Market analysis | 7 days |
| 1.3 | Questionnaires Methodology | 5 days |
| 1.4 | Observing current ticketing system | 4 days |
| 1.5 | Starting phase of Developing new ticketing system for Granite Belt Art and Craft completed | 0 days |
| 2 | **Problem Analysis** | **16 days** |
| 2.1 | The problem in functions of the old system analyzed | 7 days |
| 2.2 | Local Technical analysis | 9 days |
| 2.3 | Analysis of old ticketing system completed | 0 days |
| 3 | **Requirement Analysis** | **43 days** |
| 3.1 | Communication between stakeholders of The Granite Belt Art and Craft | 3 days |
| 3.2 | Requirement development | 12 days |
| 3.3 | Document requirements | 10 days |
| 3.4 | Completeness check | 6 days |
| 3.5 | Design and propose a new ticketing system | 14 days |
| 3.6 | Approval of new system by The Granite Belt Art and Craft | 8 days |
| 3.7 | Requirement Elicitation complete | 0 days |
| 4 | **Planning** | **24 days** |
| 4.1 | Evaluation of current ticketing system | 3 days |
| 4.2 | Hardware requirements | 2 days |
| 4.3 | Skilled Employee selection | 7 days |
| 4.4 | Team creation | 4 days |
| 4.5 | Plan development for the new ticketing system | 15 days |
| 4.6 | Planning of project complete | 0 days |
| 5 | **Designing** | **52 days** |
| 5.1 | Designing the Front end of the new system | 13 days |
| 5.2 | Designing Back end of the new system | 18 days |
| 5.3 | Designing all functionalities | 11 days |
| 5.4 | Designing User interface | 10 days |
| 5.5 | Designing phase complete | 0 days |
| 6 | **Coding** | **91 days** |
| 6.1 | Dividing the coding part of development into sub-tasks | 3 days |
| 6.2 | Assignment of sub-tasks to suitable employee | 3 days |
| 6.3 | Coding of the front end of the new ticketing system is done | 30 days |
| 6.4 | Coding of the back end of the new ticketing system is done | 55 days |
| 6.5 | Developing a user-friendly interface | 7 days |
| 6.6 | Database creation of the system | 13 days |
| 6.7 | Coding and development of the new ticketing system is completed | 0 days |
| 7 | **Testing** | **26 days** |
| 7.1 | Plan the test | 2 days |
| 7.2 | Use-case testing | 8 days |
| 7.3 | Testing environment setup | 2 days |
| 7.4 | Supervision cost of new ticketing system | 2 days |
| 7.5 | Automation testing | 10 days |
| 7.6 | Completion of Testing phase | 2 days |
| 8 | **Deployment** | **18 days** |
| 8.1 | The new ticketing system starts in The Granite Belt Art and Craft | 3 days |
| 8.2 | Staff training program | 15 days |
| 8.3 | Implementation is Done | 0 days |

## List of Resources and their cost

The table below shows the resources involved in the overall development process. The cost of each resource like Manager, Project Manager, Coder, Tester, etc., is mentioned to make the development manageable and keep in mind the projects’ cost limits.

Table : Resources

|  |  |  |
| --- | --- | --- |
| Resource Name | Initials | Std. Rate |
| Project Manager | P | $50.00/hr |
| Manager | M | $40.00/hr |
| System Analyst | S | $30.00/hr |
| Coder | C | $30.00/hr |
| Developer | D | $30.00/hr |
| Tester | T | $25.00/hr |
| Operations People | O | $20.00/hr |
| Business Analyst | B | $30.00/hr |
| Software Engineer | S | $40.00/hr |
| Web Developer | W | $50.00/hr |
| Database Engineer | D | $40.00/hr |
| Requirement Engineer | R | $40.00/hr |
| System Designer | S | $30.00/hr |
| Technical Support Team | T | $20.00/hr |
| Communication Support | C | $20.00/hr |

**Physical resources**

The non-human or physical resources are listed below the given table to manage the requirements of the project (Li et al., 2018). To understand the budgetary aspects of the project and eliminating unnecessary elements of the development.

Table : Physical Resources cost

|  |  |  |
| --- | --- | --- |
| Physical Resource | Type | Cost |
| Workstations used for the new ticketing system | Hardware | $500 |
| Internet | Hardware | $400 |
| Printers | Hardware | $250 |
| System setup | Hardware | $3000 |
| Total | | $4150 |

**Resources used in each task**

In the below-given table, each task of WBS and the resources involved. The Current system analysis includes the Project Manager, Business Analyst, System Analyst, and Operations people. The Problem Analysis task consists of the Technical support team and operations people, and so on.

Table : Resources used in each task

|  |  |  |
| --- | --- | --- |
| WBS | Task Name | Resource Names |
| 0 | **Project1** |  |
| 1 | **Current System Analysis** |  |
| 1.1 | Review the documentation of traditional system | Project Manager, Manager |
| 1.2 | Market analysis | Project Manager, Business Analyst |
| 1.3 | Questionnaires Methodology | System Analyst, Business Analyst |
| 1.4 | Observing current ticketing system | Operations People |
| 1.5 | Starting phase of Developing new ticketing system for Granite Belt Art and Craft completed |  |
| 2 | **Problem Analysis** |  |
| 2.1 | The problem in functions of the old system analyzed | Technical Support Team |
| 2.2 | Local Technical analysis | Communication Support |
| 2.3 | Analysis of old ticketing system completed |  |
| 3 | **Requirement Analysis** |  |
| 3.1 | Communication between stakeholders of The Granite Belt Art and Craft | Communication Support |
| 3.2 | Requirement development | Requirement Engineer, System Analyst, Manager |
| 3.3 | Document requirements | Technical Support Team |
| 3.4 | Completeness check | Project Manager |
| 3.5 | Design and propose a new ticketing system | Project Manager |
| 3.6 | Approval of new system by The Granite Belt Art and Craft | Manager |
| 3.7 | Requirement Elicitation complete |  |
| 4 | **Planning** |  |
| 4.1 | Evaluation of current ticketing system | Project Manager, Manager |
| 4.2 | Hardware requirements | Manager |
| 4.3 | Skilled Employee selection | Manager |
| 4.4 | Team creation | Project Manager |
| 4.5 | Plan development for the new ticketing system | Business Analyst |
| 4.6 | Planning of project complete |  |
| 5 | **Designing** |  |
| 5.1 | Designing the Front end of the new system | System Designer |
| 5.2 | Designing Back end of the new system | System Designer, Software Engineer, Developer |
| 5.3 | Designing all functionalities | System Designer, Software Engineer |
| 5.4 | Designing User interface | Software Engineer |
| 5.5 | Designing phase complete |  |
| 6 | **Coding** |  |
| 6.1 | Dividing the coding part of development into sub-tasks | Project Manager |
| 6.2 | Assignment of sub-tasks to suitable employee | Project Manager |
| 6.3 | Coding of the front end of the new ticketing system is done | Coder |
| 6.4 | Coding of the back end of the new ticketing system is done | Developer |
| 6.5 | Developing a user-friendly interface | Web Developer, Technical Support Team |
| 6.6 | Database creation of the system | Database Engineer |
| 6.7 | Coding and development of the new ticketing system is completed |  |
| 7 | **Testing** |  |
| 7.1 | Plan the test | Manager, Tester |
| 7.2 | Use-case testing | Tester |
| 7.3 | Testing environment setup | Tester |
| 7.4 | Supervision cost of new ticketing system | Manager, Project Manager |
| 7.5 | Automation testing | Tester ,Operations People |
| 7.6 | Completion of Testing phase |  |
| 8 | **Deployment** |  |
| 8.1 | The new ticketing system starts in The Granite Belt Art and Craft | Manager, Project Manager |
| 8.2 | Staff training program | Technical Support Team, Operations People |
| 8.3 | Implementation is Done |  |

## Task Scheduling

Table : Task Scheduling

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| WBS | Task Name | Duration | Start | Finish | Predecessors | Resource Names |
| 0 | **Project1** | **240 days** | **Tue 9/03/21** | **Mon 7/02/22** |  |  |
| 1 | **Current System Analysis** | **15 days** | **Tue 9/03/21** | **Mon 29/03/21** |  |  |
| 1.1 | Review the documentation of traditional system | 3 days | Tue 9/03/21 | Thu 11/03/21 |  | Project Manager ,Manager |
| 1.2 | Market analysis | 7 days | Fri 12/03/21 | Mon 22/03/21 | 2 | Project Manager ,Business Analyst |
| 1.3 | Questionnaires Methodology | 5 days | Tue 23/03/21 | Mon 29/03/21 | 3 | System Analyst ,Business Analyst |
| 1.4 | Observing current ticketing system | 4 days | Tue 23/03/21 | Fri 26/03/21 | 3 | Operations People |
| 1.5 | Starting phase of Developing new ticketing system for Granite Belt Art and Craft completed | 0 days | Fri 26/03/21 | Fri 26/03/21 | 5 |  |
| 2 | **Problem Analysis** | **16 days** | **Mon 29/03/21** | **Mon 19/04/21** |  |  |
| 2.1 | The problem in functions of the old system analyzed | 7 days | Mon 29/03/21 | Tue 6/04/21 | 5 | Technical Support Team |
| 2.2 | Local Technical analysis | 9 days | Wed 7/04/21 | Mon 19/04/21 | 8 | Communication Support |
| 2.3 | Analysis of old ticketing system completed | 0 days | Mon 19/04/21 | Mon 19/04/21 | 9 |  |
| 3 | **Requirement Analysis** | **43 days** | **Tue 20/04/21** | **Thu 17/06/21** |  |  |
| 3.1 | Communication between stakeholders of The Granite Belt Art and Craft | 3 days | Tue 20/04/21 | Thu 22/04/21 | 9 | Communication Support |
| 3.2 | Requirement development | 12 days | Fri 23/04/21 | Mon 10/05/21 | 12 | Requirement Engineer ,System Analyst ,Manager |
| 3.3 | Document requirements | 10 days | Tue 11/05/21 | Mon 24/05/21 | 13 | Technical Support Team |
| 3.4 | Completeness check | 6 days | Tue 11/05/21 | Tue 18/05/21 | 13 | Project Manager |
| 3.5 | Design and propose a new ticketing system | 14 days | Wed 19/05/21 | Mon 7/06/21 | 15 | Project Manager |
| 3.6 | Approval of new system by The Granite Belt Art and Craft | 8 days | Tue 8/06/21 | Thu 17/06/21 | 16 | Manager |
| 3.7 | Requirement Elicitation complete | 0 days | Thu 17/06/21 | Thu 17/06/21 | 17 |  |
| 4 | **Planning** | **24 days** | **Fri 18/06/21** | **Wed 21/07/21** |  |  |
| 4.1 | Evaluation of current ticketing system | 3 days | Fri 18/06/21 | Tue 22/06/21 | 17 | Project Manager ,Manager |
| 4.2 | Hardware requirements | 2 days | Wed 23/06/21 | Thu 24/06/21 | 20 | Manager |
| 4.3 | Skilled Employee selection | 7 days | Fri 25/06/21 | Mon 5/07/21 | 21 | Manager |
| 4.4 | Team creation | 4 days | Fri 25/06/21 | Wed 30/06/21 | 21 | Project Manager |
| 4.5 | Plan development for the new ticketing system | 15 days | Thu 1/07/21 | Wed 21/07/21 | 23 | Business Analyst |
| 4.6 | Planning of project complete | 0 days | Wed 21/07/21 | Wed 21/07/21 | 24 |  |
| 5 | **Designing** | **52 days** | **Thu 22/07/21** | **Fri 1/10/21** |  |  |
| 5.1 | Designing the Front end of the new system | 13 days | Thu 22/07/21 | Mon 9/08/21 | 24 | System Designer |
| 5.2 | Designing Back end of the new system | 18 days | Tue 10/08/21 | Thu 2/09/21 | 27 | System Designer, Software Engineer, Developer |
| 5.3 | Designing all functionalities | 11 days | Fri 3/09/21 | Fri 17/09/21 | 28 | System Designer ,Software Engineer |
| 5.4 | Designing User interface | 10 days | Mon 20/09/21 | Fri 1/10/21 | 29 | Software Engineer |
| 5.5 | Designing phase complete | 0 days | Fri 1/10/21 | Fri 1/10/21 | 30 |  |
| 6 | **Coding** | **91 days** | **Mon 4/10/21** | **Mon 7/02/22** |  |  |
| 6.1 | Dividing the coding part of development into sub-tasks | 3 days | Mon 4/10/21 | Wed 6/10/21 | 30 | Project Manager |
| 6.2 | Assignment of sub-tasks to suitable employee | 3 days | Thu 7/10/21 | Mon 11/10/21 | 33 | Project Manager |
| 6.3 | Coding of the front end of the new ticketing system is done | 30 days | Tue 12/10/21 | Mon 22/11/21 | 34 | Coder |
| 6.4 | Coding of the back end of the new ticketing system is done | 55 days | Tue 23/11/21 | Mon 7/02/22 | 35 | Developer |
| 6.5 | Developing a user-friendly interface | 7 days | Tue 12/10/21 | Wed 20/10/21 | 34 | Web Developer, Technical Support Team |
| 6.6 | Database creation of the system | 13 days | Tue 23/11/21 | Thu 9/12/21 | 35 | Database Engineer |
| 6.7 | Coding and development of the new ticketing system is completed | 0 days | Thu 9/12/21 | Thu 9/12/21 | 38 |  |
| 7 | **Testing** | **26 days** | **Fri 10/12/21** | **Fri 14/01/22** |  |  |
| 7.1 | Plan the test | 2 days | Fri 10/12/21 | Mon 13/12/21 | 38 | Manager ,Tester |
| 7.2 | Use-case testing | 8 days | Tue 14/12/21 | Thu 23/12/21 | 41 | Tester |
| 7.3 | Testing environment setup | 2 days | Fri 24/12/21 | Mon 27/12/21 | 42 | Tester |
| 7.4 | Supervision cost of new ticketing system | 2 days | Tue 28/12/21 | Wed 29/12/21 | 43 | Manager ,Project Manager |
| 7.5 | Automation testing | 10 days | Thu 30/12/21 | Wed 12/01/22 | 44 | Tester ,Operations People |
| 7.6 | Completion of Testing phase | 2 days | Thu 13/01/22 | Fri 14/01/22 | 45 |  |
| 8 | **Deployment** | **18 days** | **Thu 13/01/22** | **Mon 7/02/22** |  |  |
| 8.1 | The new ticketing system starts in The Granite Belt Art and Craft | 3 days | Thu 13/01/22 | Mon 17/01/22 | 45 | Manager, Project Manager |
| 8.2 | Staff training program | 15 days | Tue 18/01/22 | Mon 7/02/22 | 48 | Technical Support Team ,Operations People |
| 8.3 | Implementation is Done | 0 days | Mon 7/02/22 | Mon 7/02/22 | 49 |  |

## Gantt Chart

Gantt chart is a type of bar chart representation that can be used to present the project schedules. The project in which the Gantt chart is used includes resources, milestones, deliveries, and efforts. Gantt chart is the most used and preferred method that can be used to track the overall development process by the managers of the project.

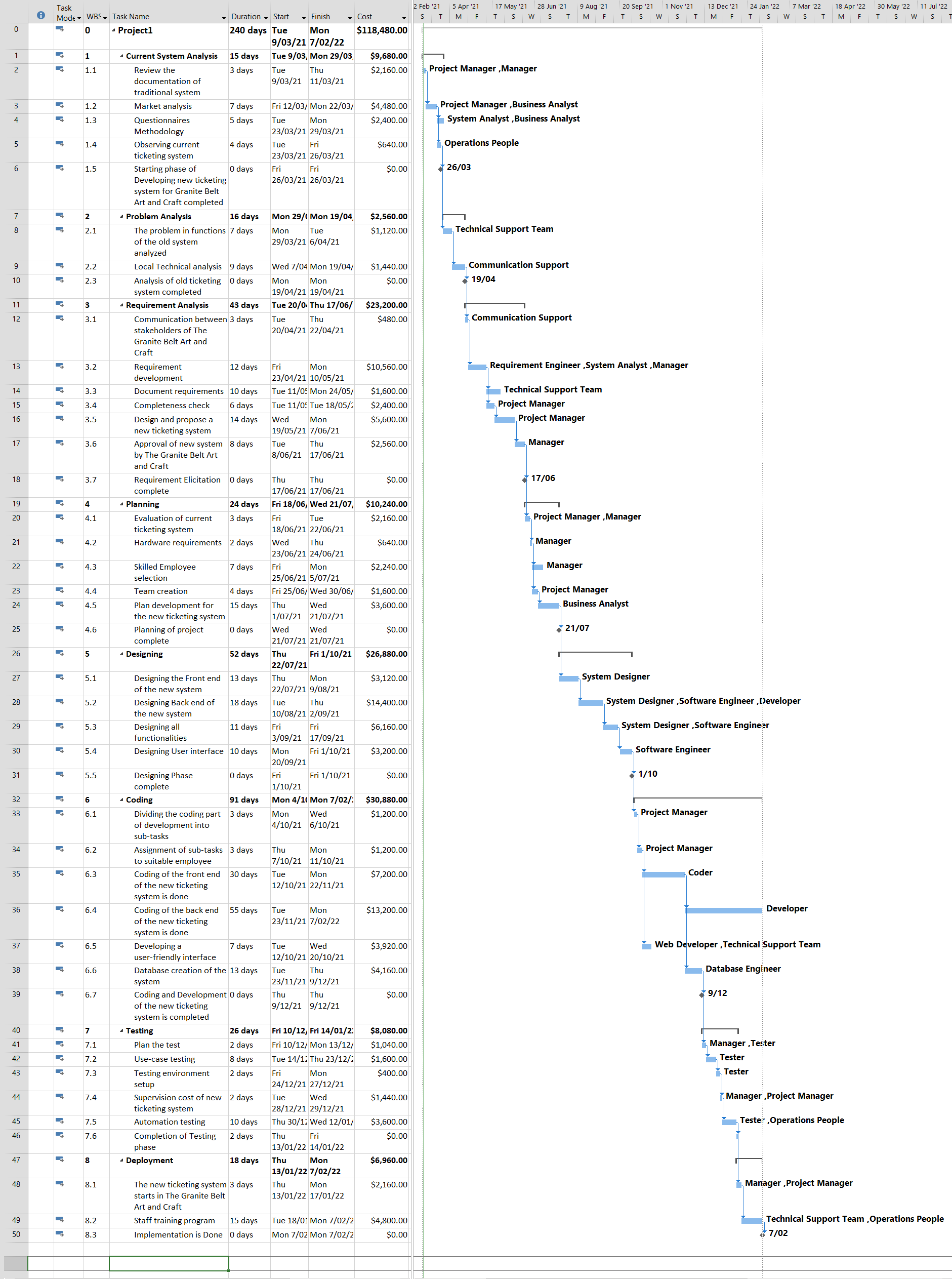


Figure : Gantt Chart

## Network Diagram

A network diagram is a type of representation used in project management that tells how the activities are interconnected with each other. The representation is done by using a box and arrows. Box gives the details or description of the activities, and the arrows show the activities are connected and part of the process.

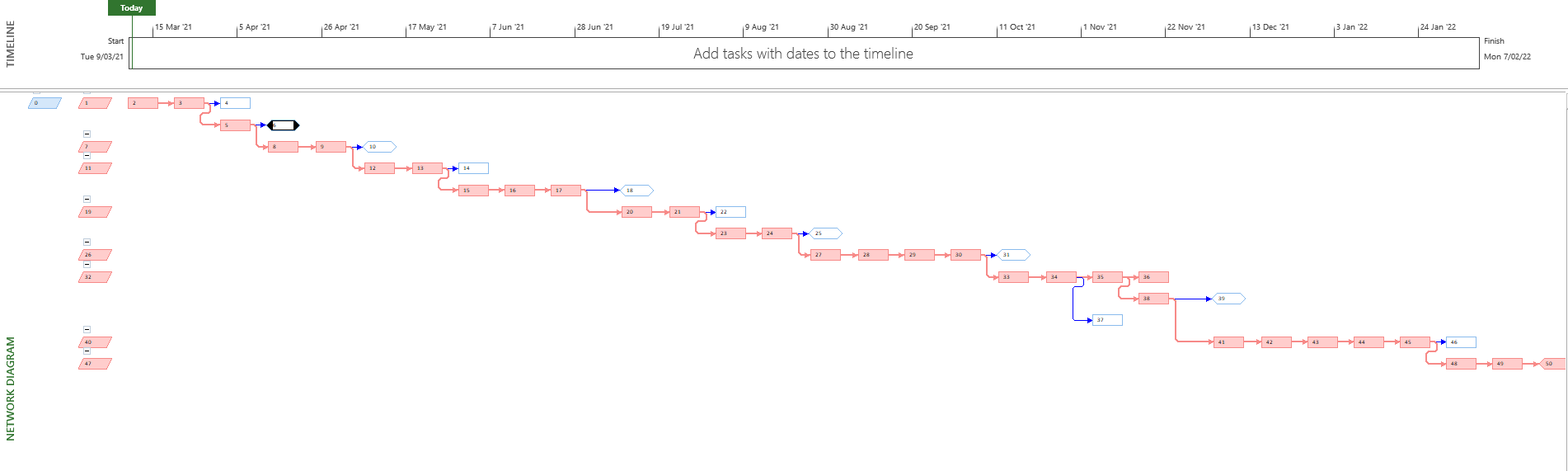


Figure : Network Diagram

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# Appendix

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| --- | --- |
| Member | Contribution |
| Abhishek Rangineni | Letter of Transmittal, Executive Summary, Project background |
| Chiranjivi Neupane | Purpose of App |
| Dipen Navnitbhai Patel | Proposed Solution |
| Nikhil Peter | Project Schedule |