**CSIT214 Assignment 1**

**FlyDreamAir – Flight and Customer Management System**

Group ID: Brownie

Date of Submission: 24 Oct 2025

Members:

|  |  |  |  |
| --- | --- | --- | --- |
| **Member** | **Student ID** | **Work done** | **Contribution** |
| Abdul Latif | 8977392 | Justification, Presentation, Lessons Learned | contributed |
| Vatsal Sharma | 8965948 | Frontend, Backend, Business Case,  Booking System, Risk Plan, Cost & Effort Estimation | Contributed |
| Amje Poothanali | 7875563 | Charter, Scope, Documentation | Contributed |
| Md Tajwar Karim | 9870738 | WBS, Dictionary, Schedule | Contributed |
| Muhammad Haider Arshad | 8308299 | Execution Evidence, Version Control | Contributed |

(LATIF ADD COVER PAGE)

# **Justification for project selection:**

We chose project 1 because it targets the airline’s main user journey, which is choosing a flight. It’s a project that is big enough to demonstrate project management skills, but also very achievable in a short amount of time.  
Our team has already discussed the frontend, which moderately reduces risks and lets us spend time on more intuitive tasks

**Criteria and Weights:**

Strategic fit(0.30): is because it focuses on the airline’s main user journey.

Skill fit(0.20): Matches the tools and skills the team has.

Stakeholder impact(0.25): Project has the potential to improve booking experience and revenue.

Complexity(0.15): can be delivered in a short amount of time using simple tooling.

Risk (0.10): Likelihood of delays due to data, tooling, and scope changes

|  |  |  |  |
| --- | --- | --- | --- |
| **Criterion** | **Weight** | **Score** | **Weighted** |
| Strategic fit | 0.30 | 5 | 1.50 |
| Skill fit | 0.20 | 4 | 0.80 |
| Stakeholder impact | 0.25 | 5 | 1.25 |
| Complexity | 0.15 | 4 | 0.60 |
| Risk | 0.10 | 4 | 0.40 |
| Total | 1.00 |  | 4.55/5 |

**Business Case**

**Purpose:**

The purpose of this business case is to justify the development of FlyDreamAir’s Flight and Customer Management System which aims to make the airline’s booking and customer management operations digital. The system allows users to:  
1. Search for flights

2. Make bookings

3. Select seats

4. Order in flight services through a web based interface

This project supports FlyDreamAir’s goal of improving operational efficiency and providing customers with a seamless online experience.

**Situation Analysis**

Currently, FlyDreamAir relies too heavily on manual and third party processes for flight bookings and customer service management work. This outdated system leads to delays along with inconsistent data handling, which is harder to track, and makes it harder to scale the company.  
The solution we offer is to introduce a digital platform that can streamline all major bookings and management functions. It provides customers direct access to flight services and functions, making the booking process a lot more convenient and intuitive, it also reduces staff workload and ensures more accurate data collection. This system also lays the foundation for future scaling by making it possible to integrate loyalty programs and real time flight updates easier without major infrastructure changes.

### **Feasibility Study**

#### **Technical Feasibility**

The project is technically achievable using the team’s existing skills and widely available technologies that are available to us. HTML, CSS, JavaScript, and GitHub are already familiar to all the members reducing the learning curve and risk of technical issues.

#### **Operational Feasibility**

The system we propose directly supports FlyDreamAir’s goal of improving customer experience and streamlining flight management services.   
Allowing users to search, book, and customize their flights online, the system reduces manual work and speeds up the customer experience while also making it more convenient.

**Economic Feasibility**

This project is cost effective as it relies entirely on free or student licensed tools. The main expense is the development effort from team members over the 12 week project period. In return, the company gets the benefits of improved efficiency, automation, and better data handling providing strong value for the time invested. The minimal financial cost and high impact make the project economically worthwhile.

**Cost–Benefit Summary**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  |   **Category** | **Estimated Cost (AUD)** | **Benefit (Description)** | **ROI (Qual.)** |
| Development Effort (12 weeks) | 15,000 | Working prototype covering core booking flow | High |
| Tools & Software | 0 | Open-source/student licenses | High |
| Miscellaneous | 500 | Operational incidentals | Medium |
| Contingency (5%) | 750 | Risk buffer | — |

# **Project Charter Highlights**

**Objectives:**

* To Develop a web based flight booking system for users.
* To enable users to manage their reservation, seats and in-flight orders.
* To improve efficiency and customer satisfaction
* To provide a scalable solution suitable for future expansions.

**Schedule**

|  |  |  |
| --- | --- | --- |
| **Phase** | **Duration** | **Key Deliverables** |
| Initiation & Planning | Week 1–3 | Charter, Scope, WBS |
| Design & Development | Week 4–8 | UI Prototype, Implementation |
| Testing & Execution | Week 9–11 | Functional Testing, Reports |
| Closing | Week 12 | Lessons Learned, Final Presentation |

**Success Criteria**

* To have a functional prototype meeting user requirements
* To deliver within the 12 week project period
* To enable positive usability feedback from reviewers
* To showcase evidence of collaboration and version control via GitHub

**Project Scope Statement**

#### **Purpose**

To develop a web based system that lets customers independently search and book flights, select seats, and do purchase inflight like add-ons such as meals or entertainment. The project aims to reduce manual work, improve booking accuracy, and create a more efficient and user-friendly customer experience for FlyDreamAir.

**Project Deliverables**

* Fully functional web based booking prototype (flight search, booking, seat selection, and add-ons)
* Project documentation (business case, charter, scope, WBS, risk plan, cost estimation, project closing)
* Effort and cost analysis using COCOMO estimation
* Version control evidence (GitHub repository logs and contributions)
* Meeting and progress records (weekly reports and milestone tracking)
* Final presentation slides and report submission

#### **Inclusions and Exclusions**

|  |  |
| --- | --- |
| In Scope | Out of Scope |
| Web-based booking interface | Mobile application version |
| Mock payment flow for demonstration | Real financial transaction systems |
| Flight, seat, and add-on management modules | Crew or aircraft logistics systems |
| Testing, documentation, and presentation materials | Marketing dashboards or customer analytics |

#### **Project Constraints**

* **Time:** Must be completed within the 12-week semester timeline (Weeks 1–12).
* **Budget:** Limited to internal student effort (approx. $16,250 estimated).
* **Resources:** 5 member student team with roles in documentation, design, backend development, and testing.

#### **Acceptance Criteria**

* Booking workflow functions correctly (search, book, confirm).
* All implemented changes should pass testing and review.
* Deliverables comply with CSIT214 project specification requirements.

# **Justification of Charter and Scope**

The project charter and scope show what our team plans to achieve and how we’ll do it. The charter explains the main goals, timeline, and what success looks like for FlyDreamAir. It helps keep everyone on track and clear about what we’re building. The schedule table makes it easy to follow each phase from start to finish. The scope part shows what’s included and what’s not, so there’s no confusion later. It also lists the assumptions we made, like using a demo system and no live payments. This helps the team set clear limits and avoid scope creep. Together, the charter and scope give a simple but strong base for managing the project well.

# **Planned Management Approach**

The project follows a hybrid approach combining traditional and agile methods. The team conducts weekly meetings, tracks tasks in Microsoft Project, and uses GitHub for version control. Roles are divided by artefact responsibility to maintain accountability.

# **Roles and Responsibilities**

|  |  |  |
| --- | --- | --- |
| **Role** | **Member** | **Responsibility** |
| Project Manager | Muhammad Haider Arshad | Scheduling, deliverables, version control |
| Lead Developer / Analyst | Vatsal Sharma | Backend development, booking system, risk tracking, effort estimation |
| Planner / Scheduler | Md Tajwar Karim | WBS, WBS Dictionary, Project Schedule |
| Documentation Lead | Amje Poothanali | Report writing, formatting, scope, charter |
| QA & Reviewer | Abdul Latif | Testing, review, presentation, lessons learned |

# **Summary Budget**

|  |  |
| --- | --- |
| **Category** | **Estimated Cost (AUD)** |
| Tools & Software (VS Code, GitHub) | $0 (Free Student Licenses) |
| Effort Cost (Team Labour – 12 weeks) | $15,000 (based on UOW project model) |
| Contingency (5%) | $750 |
| Miscellaneous | $500 |
| **Total Estimated Budget** | **$16,250** |

**Work Breakdown Structure (WBS)**

**FlyDreamAir – Flight & Customer Management System**

**Level 1 Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase** | **Weeks** | **Objective** | **Key Deliverables** |
| **Initiation & Planning** | Week 1–3 | Define project foundation, charter, scope | Project Charter, Scope Statement, Team Roles |
| **Design & Development** | Week 4–8 | Design and build functional prototype | UI/UX design, backend modules, in-flight add-ons |
| **Testing & Execution** | Week 9–11 | Validate, fix, and document project | Testing, QA reports, GitHub logs |
| **Closing & Presentation** | Week 12 | Reflect and present final outputs | Lessons learned, final report, presentation |

**Detailed WBS (Week-by-Week, with Subtasks & Days)**

**1. Initiation & Planning (Weeks 1–3 — 12 Days Total)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS ID** | **Task Name** | **Duration (Days)** | **Description / Deliverable** | **Responsible Member** |
| **1.1** | Group Formation & Role Allocation | 2 | Assign PM, Developer, Designer, Analyst, QA | Vatsal |
| **1.2** | Project Selection & Justification | 2 | Evaluate 3 projects and justify Project 1 | Latif |
| **1.3** | Business Case Creation | 2 | Analyze current system, define value & cost-benefit | Vatsal |
| **1.4** | Project Charter Development | 3 | Define objectives, timeline, success criteria | Amje |
| **1.5** | Scope Definition | 2 | Identify inclusions, exclusions, assumptions | Amje |
| **1.6** | Team Communication Setup | 1 | Setup GitHub, Docs, and meeting schedule | Haider, Vatsal |

**2. Design & Development (Weeks 4–8 — 20 Days Total)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS ID** | **Task Name** | **Duration (Days)** | **Description / Deliverable** | **Responsible Member** |
| **2.1** | Requirements Gathering | 2 | Collect functional & non-functional requirements | Haider |
| **2.2** | UI Layout & Components Design (HTML/CSS) | 3 | Define layout and page structure directly in code | Vatsal, Latif |
| **2.3** | Front-End Development | 4 | Build HTML/CSS layout for search, booking, seat pages | Vatsal |
| **2.4** | Back-End Development | 5 | Implement logic (Node.js) for bookings and services | Vatsal |
| **2.5** | In-Flight Add-Ons Module | 3 | Create food/entertainment order page | Vatsal |

**3. Testing & Execution (Weeks 9–11 — 15 Days Total)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS ID** | **Task Name** | **Duration (Days)** | **Description / Deliverable** | **Responsible Member** |
| **3.1** | Test Plan Creation | 2 | Design test cases and define acceptance criteria | Latif |
| **3.2** | Functional Testing | 3 | Verify booking, seat selection, and add-on modules | Latif |
| **3.3** | Usability Testing | 2 | Conduct user tests and gather feedback | Latif |
| **3.4** | Bug Fixing & Refinement | 3 | Fix errors and optimize system performance | Vatsal |
| **3.5** | Version Control & Logs | 2 | GitHub commits | Vatsal |
| **3.6** | Documentation Drafting | 3 | Summarize results and project execution logs | Vatsal |

**4. Closing & Presentation (Week 12 — 6 Days Total)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS ID** | **Task Name** | **Duration (Days)** | **Description / Deliverable** | **Responsible Member** |
| **4.1** | Lessons Learned & Reflection | 2 | Summarize challenges and improvements | Latif |
| **4.2** | Final Report Compilation | 2 | Merge all sections, edit, proofread | Vatsal + Latif |
| **4.3** | Presentation Preparation | 1 | Prepare slides, rehearse demo | All |
| **4.4** | Final Submission | 1 | Upload to Moodle, confirm receipt | Vatsal |

**Overall Duration Summary**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase** | **Weeks** | **Days** | **Hours (Approx.)** | **Lead Member(s)** |
| 1. Initiation & Planning | 1–3 | 12 | 30 | Haider, Amje |
| 2. Design & Development | 4–8 | 20 | 60 | Vatsal |
| 3. Testing & Execution | 9–11 | 15 | 45 | Latif, Vatsal |
| 4. Closing & Presentation | 12 | 6 | 20 | Latif |
| **Total** | **1–12** | **53 Days** | **155 Hours** | **Team Effort** |

**Key Milestones**

|  |  |  |
| --- | --- | --- |
| **Week** | **Milestone** | **Description** |
| **Week 3** | Charter & Scope Approved | Tutor feedback received, WBS validated |
| **Week 5** | Requirements Confirmed | All system modules agreed and documented |
| **Week 8** | Prototype Completed | Working front-end and back-end integration |
| **Week 10** | Testing Finalized | QA results meet success criteria |
| **Week 12** | Submission & Presentation | All documentation and demo delivered |

**WBS Dictionary & Project Schedule:**

**Gantt Chart**

A screenshot of a calendar

AI-generated content may be incorrect.A screenshot of a project

AI-generated content may be incorrect.

# **WBS Dictionary**

| **WBS ID** | **Phase / Task Name** | **Purpose / Key Activities** | **Main Deliverables** |
| --- | --- | --- | --- |
| **1.0** | **Initiation & Planning** | Establish the foundation of the project form the team, define objectives, scope, and communication plan. | Project Charter, Scope Statement, Communication Plan |
| **2.0** | **Design & Development** | Design and develop the FlyDreamAir prototype, covering user interface, backend logic, and add-on integrations. | Functional Prototype, Functional Prototype, UI Screenshots (coded layout), Backend Code |
| **3.0** | **Testing & Execution** | Conduct system testing, validate performance, and ensure all components work as intended. | Test Plan, QA Report, Version Control Evidence |
| **4.0** | **Closing & Presentation** | Finalize deliverables, compile the final report, prepare presentation, and complete submission. | Final Report, Presentation Slides, Submission Receipt |

**Introduction**

This plan identifies and manages potential risk that are associated with the development of the customer and flight booking prototype. The purpose of this is to minimize project disruptions, ensure timely delivery, and maintain the quality and budget compliance

**Risk Management Approach**

* The Project manager is responsible for maintaining a risk register.
* Risks are reviewed in weekly meetings
* Risks will be rated based on Likelihood (L) and Impact (I) on a scale of Low, Medium, High.
* The risk matrix will determine the overall severity of the project

**Risk Register**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Risk ID** | **Description** | **Category** | **Likelihood** | **Impact** | **Severity** | **Mitigation Strategy** | **Responsible Person** |
| R1 | Delay in gathering detailed requirements | Schedule | Medium | High | High | Schedule early client meetings and confirm scope in Week 5 | Project Manager |
| R2 | Technical challenges integrating booking and seat selection modules | Technical | High | High | High | Assign experienced developer and conduct early prototype testing | Lead Developer |
| R3 | Insufficient communication among team members | Organizational | Medium | Medium | Medium | Use shared channels (Teams/Trello) and weekly check-ins | All members |
| R4 | Git conflicts or versioning errors | Technical | Medium | Medium | Medium | Use feature branching, regular pull requests, and merge reviews | All developers |
| R5 | Team member unavailability | Resource | Medium | High | High | Cross-train members and maintain backup responsibilities | Project Manager |
| R6 | Scope creep due to changing client needs | Scope | High | High | High | Use change control process; freeze scope after approval | Project Manager |
| R7 | Inaccurate cost/time estimation | Cost | Low | High | Medium | Reassess estimates mid-project and track progress using MS Project | Project Manager |
| R8 | Data loss or corruption | Technical | Low | High | Medium | Use GitHub and weekly data backups | Developer |
| R9 | Poor system usability | Quality | Medium | Medium | Medium | Conduct user testing and iterative feedback sessions | QA Tester |
| R10 | Presentation or final report issues | Schedule | Low | Medium | Low | Prepare slides early and rehearse prior to presentation | All team members |

**Risk Monitoring and Review**

* **Frequency:** Weekly during lab sessions (Weeks 5–12)
* **Tool:** Trello / MS Excel Risk Register
* **Review Criteria:** Risk status (Open, Mitigated, Closed)

# **Effort & Cost Estimation**

## **Effort & Cost Estimation**

The estimation was calculated using the COCOMO (Constructive Cost Model) in organic mode, which is suitable for small scale projects.  
The total code size is estimated at approximately 0.659 KLOC (≈ 659 lines of code), representing a lightweight prototype primarily using HTML, CSS, JavaScript, and Node.js.  
  
E=2.4 x (KLOC)^1.05 =2.4 x (0.659)^1.05 =1.55 **person months**.

### **Cost Estimation**

Assuming a student labour rate of $25/hour, at 10 hours per week for 12 weeks:

5 x 10 x 12 x 25=$15,000

Adding a 5% contingency and $500 miscellaneous expenses gives a total estimated cost of approximately $16,250.

### **Effort Distribution**

|  |  |  |
| --- | --- | --- |
| **Task** | **% of Effort** | **Description** |
| Planning & Requirements | 15% | Meetings, defining scope and tasks |
| UI Design & Prototyping | 25% | HTML/CSS front-end |
| Functionality Implementation | 35% | JS logic coding |
| Testing & Debugging | 15% | Verifying booking flow and usability |
| Documentation & Presentation | 10% | Report, slides, and demo video |

### **Cost Breakdown**

|  |  |
| --- | --- |
| **Category** | **Cost (AUD)** |
| Labour (team effort) | $15,000 |
| Tools & Software | $0 |
| Miscellaneous | $500 |
| Contingency (5%) | $750 |
| Total Estimated Cost | $16,250 |

### **Conclusion**

The total estimated cost of approximately $16,250 aligns with the scope and timeframe of the CSIT214 project while being exactly the estimated budget of

$16,250.

**Overview**

The project followed an Agile Iterative Approach with weekly sprints from Week 5 to Week 12. Each sprint included planning, development, testing, and review sessions.

**Timeline (Gantt Chart Overview)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Milestone** | **Planned Task** | **Actual Outcome** |
| Week 5 | Project initiation | Defined scope, team roles, created charter | Completed on time |
| Week 6 | Requirements gathering | Interviewed client (tutor), drafted system requirements | Completed |
| Week 7 | UI design | Created prototypes for booking flow | Completed |
| Week 8 | Development Phase 1 | Implemented flight search and reservation module | Minor delay (1 day) |
| Week 9 | Development Phase 2 | Added seat selection and in-flight purchase options | Completed |
| Week 10 | Testing | Conducted functional and usability testing | Completed |
| Week 11 | Documentation | Prepared final report and slides | Completed |
| Week 12 | Final Presentation | Delivered working prototype and report | Completed successfully |

**Version Control Evidence**

**Platform Used**

* **GitHub** – Repository:

**Repository Structure**

**Commit History (Excerpt)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Commit ID** | **Message** | **Author** | **Date** |
|  | Initial project setup and README |  | 03/09/2025 |
|  | Added flight search module |  | 10/09/2025 |
|  | Implemented seat selection feature |  | 18/09/2025 |
|  | Added in-flight service purchasing |  | 25/09/2025 |
|  | Bug fixes and testing updates |  | 05/10/2025 |
|  | Final report and documentation |  | 20/10/2025 |

**Project closing & lessons learned**

The project achieved a demonstrable version of the main user journey and delivered the planned management artifacts at a level suitable for review. Scope decisions were made through practicality and kept on track with the main goal. Some trade-offs were required, and some others were also deferred depending on current

requirements. The team maintained regular progress updates and captured enough previous history.

**What went well:**

Early planning of scope: agreeing on a minimum path kept discussions focused

Regular check-ins: brief status updates tended to surface any problems as soon as possible than longer infrequent meetings

**What was challenging:**

Design polishing: Due to the nature of frontends, a lot of small polishing needs to be done regularly

Dependency timing: Some tasks appeared to be parallel but depended on previous designs or assets

**Lessons we learned:**

Standardize evidence capture to avoid last-minute scrambling

Keep meetings short and regular to make sure the given goal is being followed

Standardize frontend dimensions early to reduce the amount of polishing needed to be done later.

**Meeting Records Summary**

**Meeting Report – Week 5**

**Date:** 28 August 2025  
**Time:** 10:00 AM – 10:45 AM  
**Platform:** Zoom  
**Facilitator:** Vatsal  
**Recorder:** Latif  
**Attendees:** All team members

**Agenda:**

* Discuss project scope and roles
* Begin requirement gathering
* Create project charter

**Key Points:**

* Defined scope: flight booking, seat selection, and in-flight service purchase.
* Allocated roles: PM, Developer, UI/UX, Tester.
* Drafted project charter and initial schedule in MS Project.

**Action Items:**

* Vatsal to finalize project charter.
* Amje to start requirement analysis document.
* Tajwar to sketch UI layout.

**Next Meeting:** Week 6

**Meeting Report – Week 6**

**Date:** 4 Sept 2025  
**Time:** 9:30 AM – 10:15 AM  
**Platform:** Microsoft Teams  
**Facilitator:** Latif  
**Attendees:** All team members

**Agenda:**

* Review requirements
* Discuss system architecture
* Identify initial risks

**Key Points:**

* Confirmed main modules: user registration, flight search, booking, and payment.
* Backend framework selected: Node.js.
* Identified risks: API delays, unclear requirements.

**Action Items:**

* Tajwar to design UI prototype.
* Vatsal to start backend setup.
* Haider to prepare risk management plan.

**Next Meeting:** Week 7

**Meeting Report – Week 7**

**Date:** 12 Sept 2025  
**Time:** 10:00 AM – 10:40 AM  
**Platform:** Zoom  
**Facilitator:** Haider   
**Attendees:** All team members

**Agenda:**

* Progress review on UI and backend
* Plan integration phase

**Key Points:**

* UI prototype completed and approved.
* Backend database schema under development.
* Integration testing planned for Week 8.

**Action Items:**

* Vatsal to finish backend routes for bookings.
* Haider to update risk log.
* Tajwar to refine UI responsiveness.

**Next Meeting:** Week 8

**Meeting Report – Week 8**

**Date:** 19 Sept 2025  
**Time:** 11:00 AM – 11:30 AM  
**Platform:** Zoom  
**Facilitator:** Amje  
**Attendees:** All team members

**Agenda:**

* Integration and testing updates
* Review risk mitigation status

**Key Points:**

* Flight search and booking features functional.
* Encountered seat selection API issues—temporary fix applied.
* Risks R2 and R4 marked “Under Control.”

**Action Items:**

* Vatsal to optimize API response time.
* Amje to test UI-user flow.
* Haider to prepare milestone report.

**Next Meeting:** Week 10

**Meeting Report – Week 10**

**Date:** 3 Oct 2025  
**Time:** 10:00 AM – 10:30 AM  
**Platform:** Zoom  
**Facilitator:** Latif  
**Attendees:** All team members

**Agenda:**

* Prepare final deliverables
* Plan presentation and closing tasks

**Key Points:**

* Testing completed with all features functional.
* Final report compiled by Vatsal and Latif.
* Version control summary generated from GitHub commits.

**Action Items:**

* Vatsal to finalize final report.
* Tajwar to polish UI screenshots for submission.
* All members to rehearse presentation.

**Next Meeting:** Week 11 (Final rehearsal)

**Work Allocation**

|  |  |  |
| --- | --- | --- |
| **Member** | **Role** | **Main Tasks** |
| Haider | Project Manager | Scheduling, risk tracking, meeting facilitation, version control management |
| Vatsal | Lead Developer / Analyst | Backend development, effort and cost estimation, integration of system modules, technical support during testing, Report drafting, Project coordination |
| Vatsal, Latif | UI/UX Designer | Interface design using HTML/CSS. |
| Latif | QA and Testing | System testing, quality assurance, preparation of risk register, report review, Report drafting, and final verification |
| Md Tajwar Karim | Planner / Scheduler | Work Breakdown Structure (WBS) creation, WBS Dictionary development, project scheduling and progress tracking |
| Amje Poothanali | Documentation Lead | project charter and scope preparation, formatting and document structuring |

**Testing Evidence**

* Screenshots showing working features (flight search, seat selection)
* Test report with pass/fail summary for each function

**Communication**

* Weekly meetings on Zoom/Teams
* Shared repository via GitHub
* Collaboration tools: Google Docs (for reports), Trello (for task management)

**Project Execution Evidence:**

**Login Page:**

**A screenshot of a login page

AI-generated content may be incorrect.**

**Registration Page:**

**A screenshot of a computer

AI-generated content may be incorrect.**

**Booking Page:**

A plane flying in the sky

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.

The booking page includes a booking form that a customer can use to book their flight. They have to add their details and book their preferred flight.  
The customer can also sort flights by price, duration, and departure time.

**Manage Page:**

A screenshot of a computer

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.A white rectangular object with a white background

AI-generated content may be incorrect.

The Manage page lets a customer pick out their seats, meals, add-ons, and entertainment. The customer simply has to enter their flight number and last name. The total amount is updated after each add-on. Once the customer is ready to pay they can click the proceed to payment button to complete their booking

**Flight Page:**

A screenshot of a website

AI-generated content may be incorrect.

Your flight page showcases a customer their upcoming flight while also advertising the airline’s Onboard Wi-fi, premium Meals, and Upgrades.

**Support Page:**

**A screenshot of a computer

AI-generated content may be incorrect.**

The support page lets a customer contact an airline official. All they have to do is enter their email address, Subject and their message. Once a customer has filled the details out they can send the message.

**Functionality implementation:**  
The FlyDreamAir prototype was implemented using HTML, CSS, JavaScript, and Node.js to represent the booking and management process in a simplified, interactive web environment.   
The focus is to simulate real airline operations while maintaining usability.

### **Core Functionalities**

• Flight Search: Filters flights by origin, destination, and date.  
• Booking System: Captures passenger and flight details.  
• Seat Selection: Displays dynamic seat grid with availability indicators.  
• In-Flight Services: Lets users select meal and entertainment add-ons.  
• Confirmation: Displays complete booking summary after form submission.

### **Tools and Technologies**

|  |  |
| --- | --- |
| Tool / Technology | Purpose |
| Node.js | Backend simulation and routing |
| HTML / CSS | Front-end structure and design |
| JavaScript | Client-side interactivity |
| GitHub | Version control and collaboration |
| VS Code | Development environment |

### **Testing & Evaluation**

Each functional component was tested individually to ensure proper flow and user responsiveness.   
The system successfully executed core functions during demonstrations, with no critical defects observed.   
Minor layout adjustments were made based on feedback from internal testing.

### **Conclusion**

Overall, the FlyDreamAir project successfully met its goals of creating a functional flight booking experience and management prototype within budget, within budget, on schedule, and with collaborative participation from all team members, led by Vatsal and Latif who were also the major contributors to all the work done.

**References:**