**Project Management Plan Template**

(Group No 5)

**Project Management Plan**

***IdeaGenius*: AI-Powered Idea Generation and Task Management Platform**

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# Introduction:

The following Project Management Plan outlines the framework and strategy for the successful execution of the *IdeaGenius* project. *IdeaGenius* is an innovative application powered by advanced AI technology, designed to enhance creative thinking and problem-solving abilities. This Project Management Plan provides a high-level overview of the project, outlining its objectives, scope, deliverables, and benefits.

The primary aim of the *IdeaGenius* project is to develop a user-friendly platform that empowers individuals and teams to generate new ideas and solve challenges in a creative and collaborative manner. By leveraging AI algorithms and internet support, *IdeaGenius* facilitates real-time idea generation and collaboration, ultimately enhancing productivity and innovation.

Key deliverables of the project include the development of the *IdeaGenius* platform, which encompasses various features such as personalized idea generation, real-time collaboration, task management, and internet support. Additionally, the project will involve testing, deployment, and training activities to ensure the successful implementation and adoption of the platform.

The benefits of the *IdeaGenius* project extend beyond individual users to organizations and communities seeking to foster innovation and creativity. By providing a structured framework for idea generation and collaboration, *IdeaGenius* enables organizations to streamline their innovation processes, drive growth, and achieve strategic objectives.

While this Introduction provides a summarized framework of the project's purpose and scope, the subsequent sections of the Project Management Plan will delve into greater detail regarding specific aspects such as project objectives, scope management, schedule, budget, and risk management.

# 2.0 PROJECT MANAGEMENT APPROACH

The project management approach for the *IdeaGenius* project is centered around collaboration, accountability, and effective communication. Our team comprises dedicated individuals with defined roles and responsibilities, working together to achieve project objectives and deliverables.

Key roles within the project team include:

1. **Project Manager:** Responsible for overall project coordination, planning, and execution. The Project Manager oversees the project timeline, budget, and resources, ensuring alignment with project goals and stakeholder expectations.
2. **Development Team:** Comprising software developers, AI engineers, UX/UI designers, and quality assurance (QA) engineers, the development team is responsible for building, testing, and deploying the *IdeaGenius* platform. Each team member brings specialized expertise to the project, contributing to its success.
3. **Stakeholders:** Stakeholders, including users, managers, decision-makers, and external partners, play a vital role in providing feedback, support, and resources throughout the project lifecycle. Their involvement ensures that project deliverables meet the needs and expectations of end users and stakeholders.

Resource constraints and limitations are identified and addressed proactively to mitigate risks and ensure project success. Any decisions requiring authorization, such as additional funding or changes to project scope, will be communicated and approved by the project sponsor or designated authority.

The project management approach emphasizes transparency, accountability, and flexibility, allowing for adaptability to changing requirements and unforeseen challenges. Regular project status updates, meetings, and reporting mechanisms facilitate effective communication and decision-making, ensuring alignment with project objectives and stakeholder expectations.

By adhering to this project management approach, we aim to deliver a successful *IdeaGenius* platform that meets user needs, drives innovation, and achieves project goals within the specified timeline and budget.

**3.0 PROJECT TITLE:**

*IdeaGenius: AI-Powered Idea Generation and Task Management Platform*

# 4.0 JUSTIFICATION:

The *IdeaGenius* project meets the demand for innovative idea generation and collaboration tools in today's market. By leveraging AI technology and user-friendly design, *IdeaGenius* boosts productivity, enhances competitiveness, and aligns with strategic organizational goals. Its user-centric approach ensures maximum engagement and adoption, promising significant value for organizations and individuals.

# 5.0 OBJECTIVES AND PROJECT SCOPES:

The objectives of the *IdeaGenius* project are to:

1. Develop an innovative platform powered by AI technology to facilitate idea generation and collaborative problem-solving.
2. Provide users with personalized prompts, collaboration tools, and task management features to streamline the creative process.
3. Enhance productivity, foster innovation, and drive meaningful outcomes for individuals, teams, and organizations.

The project scope includes:

1. Designing and developing the *IdeaGenius* platform, including frontend and backend components, AI algorithms, and user interfaces.
2. Implementing features such as personalized idea generation, real-time collaboration, task management, and internet support.
3. Testing the platform for functionality, usability, and performance to ensure a seamless user experience.
4. Deploying the platform in a production environment, including server setup, configuration, and optimization.
5. Providing training and support to users to facilitate adoption and maximize platform utilization.

The project does not include:

1. Customization beyond the defined scope of features and functionalities.
2. Integration with third-party systems or services unless explicitly specified.
3. Hardware procurement or infrastructure setup beyond the requirements for platform deployment.
4. Ongoing maintenance and support beyond the initial deployment phase, unless agreed upon separately.

**6.0 OVERVIEW OF THE PROJECT:**

*IdeaGenius* is an AI-powered platform designed to enhance creative thinking and problem-solving. It offers personalized prompts, real-time collaboration, and task management features to empower users to generate ideas, collaborate effectively, and drive innovation. By leveraging advanced AI technology, *IdeaGenius* aims to revolutionize the way organizations approach idea generation and foster a culture of innovation.

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**Figure**: use case diagram

**7.0 STAKEHODERS ANALYSIS:**

Primary Stakeholders:

1. Project Team
2. Project Sponsor
3. Users

Secondary Stakeholders:

1. Management
2. Investors
3. External Partners

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# 8.0 MILESTONE LIST

The *IdeaGenius* project encompasses several key milestones essential for the successful development, deployment, and adoption of the platform. Each milestone represents a significant stage in the project lifecycle, marking key achievements and progress towards project objectives. The milestones outlined below provide insight into the major phases of the project, including requirements gathering, design, development, testing, documentation, and deployment. As we progress through these milestones, our focus remains on delivering a robust, user-friendly platform that empowers individuals and teams to unleash their creative potential and drive innovation. Effective communication, collaboration, and stakeholder engagement will be paramount as we navigate through each milestone, ensuring alignment with project goals and expectations.

|  |  |  |
| --- | --- | --- |
| Milestone | Description | Date |
| Complete SRS | By May 25th, we'll finalize a comprehensive blueprint detailing all functional and non-functional requirements, ensuring alignment with your vision. | 25/05/24 |
| Design | By June 5th, we'll present a detailed design document outlining the system architecture and technology stack of your software solution. | 05/06/24 |
| Complete Coding | By June 25th, our development team will finish implementing the specifications, readying the software for testing. | 25/06/24 |
| Complete Testing and Debugging | By July 15th, rigorous testing will ensure the reliability and performance of your software, addressing any issues promptly. | 15/07/24 |
| Documents – User Guides and Installation | By July 25th, we'll provide user guides and installation instructions for seamless adoption and operation of the software. | 25/07/24 |

**9.0 Process Model to be followed:**

Based on the nature and objectives of the *IdeaGenius* project, a suitable process model to be followed would be the Agile methodology, specifically Scrum. Here's why:

Iterative Development: Agile methodologies, including Scrum, emphasize iterative development cycles. Given the innovative and dynamic nature of *IdeaGenius*, where requirements may evolve as users provide feedback or as new technologies emerge, an iterative approach allows for flexibility and adaptability throughout the development process.

Collaboration and Communication: Scrum encourages close collaboration between cross-functional teams, including developers, designers, and stakeholders. This aligns well with the collaborative nature of the *IdeaGenius* project, which aims to enhance creative thinking and problem-solving abilities through real-time collaboration features. Regular meetings such as daily stand-ups, sprint planning, and sprint reviews facilitate effective communication and feedback exchange.

Prioritization of Features: Agile methodologies prioritize delivering high-value features early and continuously refining the product based on feedback. For *IdeaGenius*, it's crucial to prioritize features that enhance idea generation, collaboration, and user experience. Agile allows for the flexibility to adjust priorities based on changing requirements or market demands, ensuring that the most valuable features are developed first.

Risk Mitigation: Agile methodologies inherently mitigate risks by breaking down the project into smaller, manageable increments (sprints). This allows for early identification and resolution of issues, minimizing the impact of potential risks on the overall project timeline and budget. Given the innovative nature of *IdeaGenius*, where technical or usability challenges may arise, Agile provides a structured approach to address these challenges iteratively.

Continuous Improvement: Agile methodologies promote a culture of continuous improvement through regular reflection and adaptation. By conducting retrospective meetings at the end of each sprint, teams can identify what went well, what could be improved, and take corrective actions for future sprints. This iterative improvement process ensures that the project remains aligned with its objectives and stakeholders' expectations.

In summary, the Agile Scrum methodology is well-suited for the *IdeaGenius* project due to its iterative nature, emphasis on collaboration and communication, prioritization of features, risk mitigation strategies, and focus on continuous improvement. By following the Scrum framework, the project team can effectively deliver a user-friendly platform that empowers individuals and teams to enhance their creative thinking and problem-solving abilities.

**10.0 WORK BREAKDOWN STRUCTURE:**

**1.Project Management and Planning**

• Develop project plan

• Define project requirements

• Coordinate team activities

• Risk assessment and mitigation

**2.Technical Feasibility**

• Technology Stack Assessment

* Research and evaluate existing technologies
* Ensure compatibility and integration

• Development Tools Evaluation

* Research and select development tools
* Ensure support for collaboration and creativity

• Data Security and Privacy

* Define security measures
* Ensure compliance with data protection regulations

• Scalability Assessment

* Evaluate scalability requirements
* Plan for potential growth

• User Experience (UX) Design

* Design intuitive and engaging user interface

**3.Financial Feasibility**

• Development Costs Estimation

* + Estimate salaries, licenses, and infrastructure costs

• Maintenance Costs Evaluation

* + Assess ongoing expenses for updates and support

• Revenue Generation Analysis

* + Identify potential revenue streams
  + Assess market demand and willingness to pay

• Return on Investment (ROI) Calculation

* Calculate expected ROI over time

• Risks and Contingencies

* Identify potential risks and develop contingency plans

• Market Analysis

* Analyze the competitive landscape
* Identify opportunities for differentiation

**4.Software Development**

• Front-end Development

* User interface design and implementation
* Integration with AI technologies

• Back-end Development

* Server-side logic and database design
* Implementation of collaboration features

• Testing

* Unit testing
* Integration testing
* User acceptance testing

**5.Deployment and Support**

• System deployment

• User training

• Launch and ongoing support

**11.0: ESTIMATION:**

1. **Expert Judgment:**
   * **Description:** Expert judgment relies on the experience and insight of knowledgeable individuals to provide estimates based on past projects, industry standards, or their domain expertise.
   * **Process:** Experts are consulted individually or as a group to estimate project aspects like duration, resources, and costs, using techniques such as analogy-based estimation or consensus-building methods.
   * **Advantages:** Draws on collective wisdom, quick and reasonably accurate, helps identify risks early.
   * **Limitations:** Subjective, varying estimates may overlook project-specific factors.
2. **Bottom-Up Estimation:**
   * **Description:** Bottom-up estimation breaks down the project into smaller tasks, estimating effort and resources for each, then aggregating for the overall estimate.
   * **Process:** Project tasks are identified and estimated individually, using techniques like historical data or expert judgment, before rolling up into a total project estimate.
   * **Advantages:** Detailed and accurate, identifies dependencies and risks, aids in planning and resource allocation.
   * **Limitations:** Time-consuming, resource-intensive, dependent on task accuracy and thoroughness of breakdown.

**12.0 RESOURCE REQUIREMENTS**

**12.1 SOFTWARE REQUIREMENTS**

Here's the software requirements for the *IdeaGenius* project:

1. **Functional Requirements:**
   * User registration and authentication
   * Idea generation with text, images, and multimedia
   * Real-time collaboration features
   * Task management capabilities
   * Access to external resources for research
   * Analytics and reporting tools
2. **Non-Functional Requirements:**
   * Responsive and scalable performance
   * Data encryption and access controls for security
   * Intuitive user interface with accessibility features
   * Reliable system with backups and data recovery
   * Compatibility with modern browsers and devices
3. **Constraints:**
   * Technological compatibility with AI algorithms and real-time collaboration
   * Compliance with data protection regulations (e.g., GDPR, CCPA)
   * Consideration of budgetary and resource limitations

**12.2 HARDWARE REQUIREMENTS**

Here are hardware requirements for the *IdeaGenius* project:

1. **Server Infrastructure:**
   * High-performance servers with ample storage and backup systems.
   * Robust networking equipment for reliable connectivity.
2. **Client Devices:**
   * Desktops, laptops, and mobile devices with modern web browsers.
   * Adequate processing power and internet connectivity.
3. **Development Environment:**
   * Workstations with development tools and version control systems.
   * Testing devices and emulators for quality assurance.
4. **Additional Hardware:**
   * Optional hardware for specialized features like AI accelerators or IoT devices.
   * Peripherals such as printers and audiovisual equipment for collaboration.

These hardware requirements support the development, deployment, and access of the *IdeaGenius* platform, ensuring scalability, reliability, and performance.

**12.3 HUMAN RESOURCE REQUIREMENTS**

1. **Core Team:**
   * Project Manager
   * Developers (Frontend, Backend, Database)
   * Designers (UX/UI)
   * Quality Assurance/Testers
   * AI Specialist
   * Technical Support
2. **Stakeholders:**
   * Business Owners
   * End Users
   * Investors
3. **External Support:**
   * Subject Matter Experts
   * Legal Counsel
   * Marketing Specialists
4. **Training and Documentation:**
   * Trainers
   * Technical Writers
5. **Additional Resources:**
   * Administrative Support
   * Project Advisors

This concise overview outlines the key human resources needed for the *IdeaGenius* project, ensuring the necessary expertise, support, and guidance for successful development and implementation.

**13.0: PROJECT SCHEDULE:**

Here is the project schedule following scrum:

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Here,  
Sprint 1 Consists of:

* Set up project infrastructure.
* User authentication
* Basic UI framework
* Initial database schema design

Sprint 2 Consists of:

* Develop core functionality.
* Idea submission
* Real-time collaboration
* Basic task management

Sprint 3 Consists of:

* Enhance user experience.
* Improved UI/UX design
* Advanced task management
* Integration with external resources

Sprint 4 Consists of:

* Implement AI algorithms.
* AI-powered idea generation
* Fine-tuning collaboration
* Performance optimization

Sprint 5 Consists of:

* Comprehensive testing
* End-to-end testing
* User acceptance testing
* Documentation preparation

Sprint 6 Consists of:

* Finalize deployment plan.
* Deployment to production
* Configuration management

Final review and sign-off

**14.0 DELIVERY PLAN:**

Here's a delivery plan for the *IdeaGenius* project following the Agile model, specifically Scrum, with delivery of increments in iterative sprints:

1. **Sprint 1 (2 weeks):**
   * Objective: Set up project infrastructure and lay the foundation for development.
   * Deliverables:
     + User authentication and registration system.
     + Basic UI framework and navigation.
     + Initial database schema design.
2. **Sprint 2 (2 weeks):**
   * Objective: Develop core functionality for idea generation and collaboration.
   * Deliverables:
     + Ability to create and submit ideas.
     + Real-time collaboration features (e.g., live chat, comments).
     + Basic task management functionality.
3. **Sprint 3 (2 weeks):**
   * Objective: Enhance user experience and implement additional features.
   * Deliverables:
     + Improved UI/UX design based on feedback.
     + Advanced task management features (e.g., task assignment, deadlines).
     + Integration with external resources for idea research.
4. **Sprint 4 (2 weeks):**
   * Objective: Implement AI algorithms and refine platform functionality.
   * Deliverables:
     + Integration of AI-powered idea generation tools.
     + Fine-tuning of collaboration features based on user testing.
     + Performance optimization and bug fixes.
5. **Sprint 5 (2 weeks):**
   * Objective: Conduct comprehensive testing and prepare for deployment.
   * Deliverables:
     + End-to-end testing of all features and functionalities.
     + User acceptance testing with stakeholders and target users.
     + Documentation and training materials preparation.
6. **Sprint 6 (1 week):**
   * Objective: Finalize deployment plan and prepare for launch.
   * Deliverables:
     + Deployment of the *IdeaGenius* platform to production environment.
     + Configuration management and setup of monitoring tools.
     + Final review and sign-off from stakeholders.

This delivery plan outlines the schedule for delivering each increment of the *IdeaGenius* platform in iterative sprints, ensuring continuous improvement and feedback throughout the development process.

**15.0 RISK ANALYSIS:**

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Score Calculation:

Score = Probability \* Impact

Full Forms of Abbreviations:

• ST: Skill and Technology

• BU: Business

• PS: Project Scope

• TE: Technical

• CU: Customer Changes

• DE: Development Environment

• SI: Server/Infrastructure

• BL: Budgetary Limitations

• LOC: Lines of Code

**16.0 QUALITY CONTROL PLAN:**

Here's the quality control plan for the *IdeaGenius* project:

1. **Requirements Verification:**
   * Thoroughly review and validate requirements for clarity and completeness.
2. **Code Reviews:**
   * Conduct regular code reviews to ensure quality and adherence to standards.
3. **Testing and QA:**
   * Develop comprehensive test plans and automate testing processes.
   * Validate functionality, usability, performance, and security.
4. **Continuous Integration and Deployment:**
   * Implement CI/CD pipelines for automated build, test, and deployment.
5. **Defect Tracking and Resolution:**
   * Track and prioritize defects, ensuring timely resolution and verification.
6. **User Feedback and Iterative Improvement:**
   * Gather user feedback for iterative improvements in usability and functionality.
7. **Documentation and Knowledge Management:**
   * Maintain up-to-date documentation for reference and knowledge sharing.
8. **Performance Monitoring and Optimization:**
   * Monitor performance metrics and optimize platform responsiveness and scalability.
9. **Compliance and Security Checks:**
   * Ensure compliance with regulations and conduct regular security assessments.

This streamlined quality control plan outlines key activities to ensure the delivery of a high-quality *IdeaGenius* platform, focusing on thorough verification, continuous improvement, and compliance with standards and regulations**.**

**17.0 BUDGET:**

Budget using COCOMO Model:

**1.** **Estimate Effort:**

• Lines of Code (LOC): Based on the features and scope described, BrainisTrained is estimated to require approximately 15,000 LOC.

• Effort Multiplier (EM): Considering the risk factors and project complexity, an EM of 1.3 is reasonable.

• Person-Months (PM) = (15,000 LOC \* 1.3 EM) / 100 = 195 PM

**2.** **Calculate Development Cost:**

• Programmer Cost per Month: Assume Taka 40,000 per month per programmer.

• Total Development Cost = 195 PM \* Taka 40,000/PM = Taka 7,800,000

**3. Additional Costs:**

• Hardware and Software: Taka 200,000

• Project Management: Taka 300,000

• Testing and Quality Assurance: Taka 200,000

• Maintenance and Support: Taka 100,000

**4. Total Project Budget**:

• Taka 7,800,000 (Development) + Taka 200,000 (Hardware/Software) + Taka 300,000

(Project Management) + Taka 200,000 (Testing/QA) + Taka 100,000

(Maintenance/Support) = Taka 8,600,000

**\*\*5. Profit and Final Price:**

• Profit Margin: Assume 25%

• Profit = Taka 8,600,000 \* 25% = Taka 2,150,000

• Final Price = Taka 8,600,000 + Taka 2,150,000 = Taka 10,750,000

**Please note:** This budget is an estimate based on the information provided and can vary depending on several factors.

**Recommendations:**

• **Mitigate risks**: Address identified risks through proactive measures like training developers, using well-defined requirements, and implementing continuous integration and continuous delivery (CI/CD) practices.

• **Track progress:** Monitor project progress against the baseline estimates and adapt the budget if necessary.

**• Plan for contingencies:** Build a buffer into the budget to handle unforeseen challenges.

By carefully considering risks and using the COCOMO model, we can develop a realistic and feasible budget for our *IdeaGenius* project.

**18.0 CONCLUSION:**

In conclusion, the *IdeaGenius* project has been a transformative journey, driven by dedication and expertise. From requirements gathering to deployment, our shared vision has guided us toward empowering creativity and problem-solving.

Reflecting on our journey, we've successfully delivered a robust platform, enhancing productivity and fostering innovation. Milestones like design, coding, testing, and documentation showcase our commitment to excellence and resilience.

Moving forward, we're dedicated to supporting *IdeaGenius'*s evolution by engaging users, gathering feedback, and iterating on features. I extend my gratitude to all involved for their hard work and collaboration in achieving our goals. Let's continue fostering innovation and driving positive change together.