



Project Name

Project Dashboard Template

March 1, 2025

Kailong duan, Anushka Chaudhari, Manuel Garcia
WOW (Every Saturday/5pm, Zoom)

Team Profile Page



Kailong Duan
Henan, China
Project
Management
Graduate Student
in CS

Worked as
software engineer
for 3 years.



Anushka Arvind
Chaudhari
Project
Management
Graduate Student
in CS

Participated In
Various Technical
College events
during undergrad



Manuel Garcia
Irving, TX

CS Undergrad

Commercial Real
Estate Broker for
over 4 years

SmartBid Auction Platform



Project Status is **Yellow**
Criteria to **Green** resolve resource challenge

Summary		Project Status	Financial Status
SmartBid Auction Platform is an advanced bidding system designed to optimize online auctions, particularly for businesses and procurement processes. It uses AI-powered automation, real-time analytics, and competitive bidding strategies to enhance efficiency and transparency		Project has started gathering requirements for the stakeholder template after getting the SOW signed. Team is in a good spirit to start the next tasks.	<ul style="list-style-type: none">□ Contract Price: \$ 1.5M□ Cost (Baselined): \$800k<ul style="list-style-type: none">□ Actual Spend: \$ \$ 13,440□ ETC: \$ \$535,360.00□ EAC: \$ \$548,800□ Current Margin: 63.25%
Key Achievements	Planned Activities	Risks	Major Milestones
<ul style="list-style-type: none">•Completed SOW – Mar 3•Completed documenting stakeholders objectives – Mar 6	<ul style="list-style-type: none">•Finalize stakeholder template - Mar 7•Start gathering frontend requirements - Mar 8	<p>task 36 Create Pictures and Video File Storage System Req might be delayed if technical requirements for storage capacity and security are unclear, which could impact the start of Task 59 Wireframes.</p> <p>M1: Asses the current storage infrastructure and security protocols to ensure they meet the project's goals</p> <p>M2 : Engage storage and security experts early to define clear capacity and security requirements.</p>	<ul style="list-style-type: none">•SOW Signed•Complete requirements specification document - June 19•Complete coding- July 23•Code ready for testing- July 24•Complete Testing -Aug 27deploy -Aug 29

Governance Plan Overview

The governance plan for the Smart Bid Auction project is designed to encourage close collaboration between the Technical leadership Team and Stakeholders, which ensures technical progress is closely tied with user needs and risk management. Stakeholders will actively contribute by giving feedback on functionality and user experience by meeting with Leads on regular basis. The senior leadership stakeholders will participate in key recurring meetings to ensure the project stays aligned with strategic goals and approve major decisions.

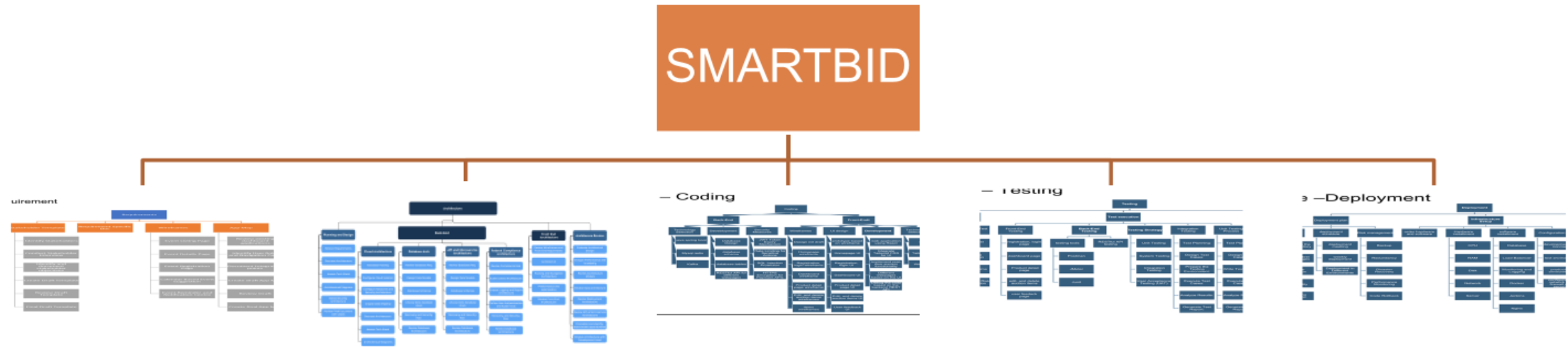
→What are the challenges?

While this plan involves a balanced approach between technical details and Stakeholders feedback and strategic oversight, potential challenges such as coordinating feedback from different groups without delaying development could arise. Additionally, getting busy senior leaders to adhere to regular meeting schedules may also be difficult.

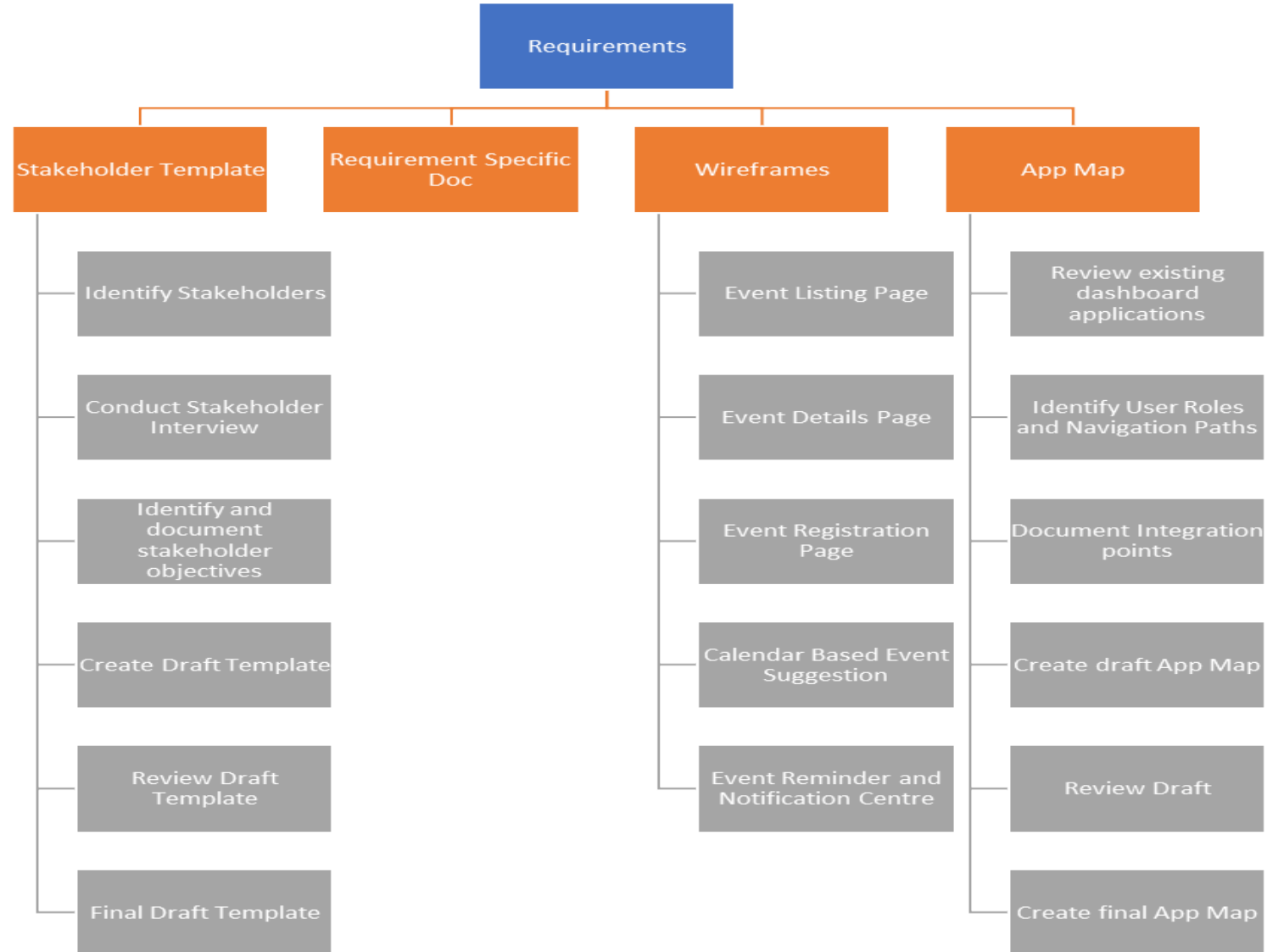
Governance Plan Table

Governance Type	Day / Time	Purpose	Input	Output	Attendees (Owner)
Weekly Internal Status Meeting	M/W 9am-10am	Review Schedule, RAID, Resources, Financials	MPP, RAID, CR Log, Current Status, Previous Dashboard	Updated MPP, RAID, CR Log, and Dashboard	(PM) Team Leads, Technical Managers
Weekly External Client Status Meeting	Friday 11:00am-11:30am	Review progress, RAID, gather feedback	Updated dashboard, RAID, Handle feedback and customer requests.	update Client feedback,	(PM) Client, Project Team Leads
Weekly Internal Technical Meeting	Thursday 11:00am-11:30am	Discuss and solve technical issues	Technical updates and bug issue feedback.	Technical upgrades and bug fixes.	Team Leads Arch Leads, Req Leads
Weekly Internal Manager/Director Status Meeting	Thursday 3:00 am-4:30am	Review progress, RAID,Determine resource allocation issues.	Customer feedback and resource issues.	Determine resource allocation and provide feedback to the customer.	(PM) VPs, managers CFO,,COO,CTO
Monthly Internal department meeting	Friday 10:00am-11:00am	Coordinate departmental communication and handle legal and	Resource delivery involved in the project, legal and financial risks	Updated RAID	(PM) VPs, managers CFO,CTO,COO,Chief Legal Officer

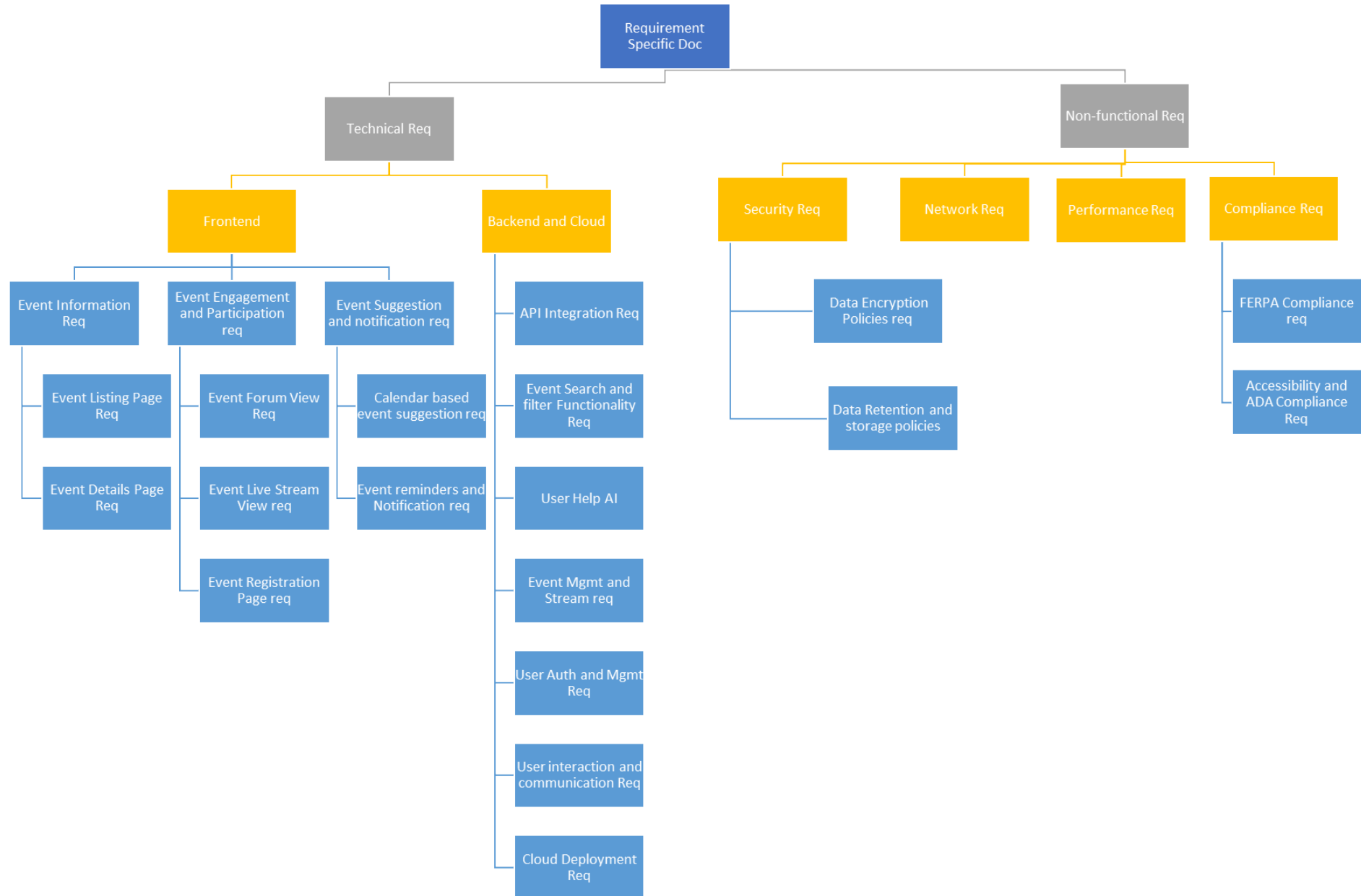
WBS



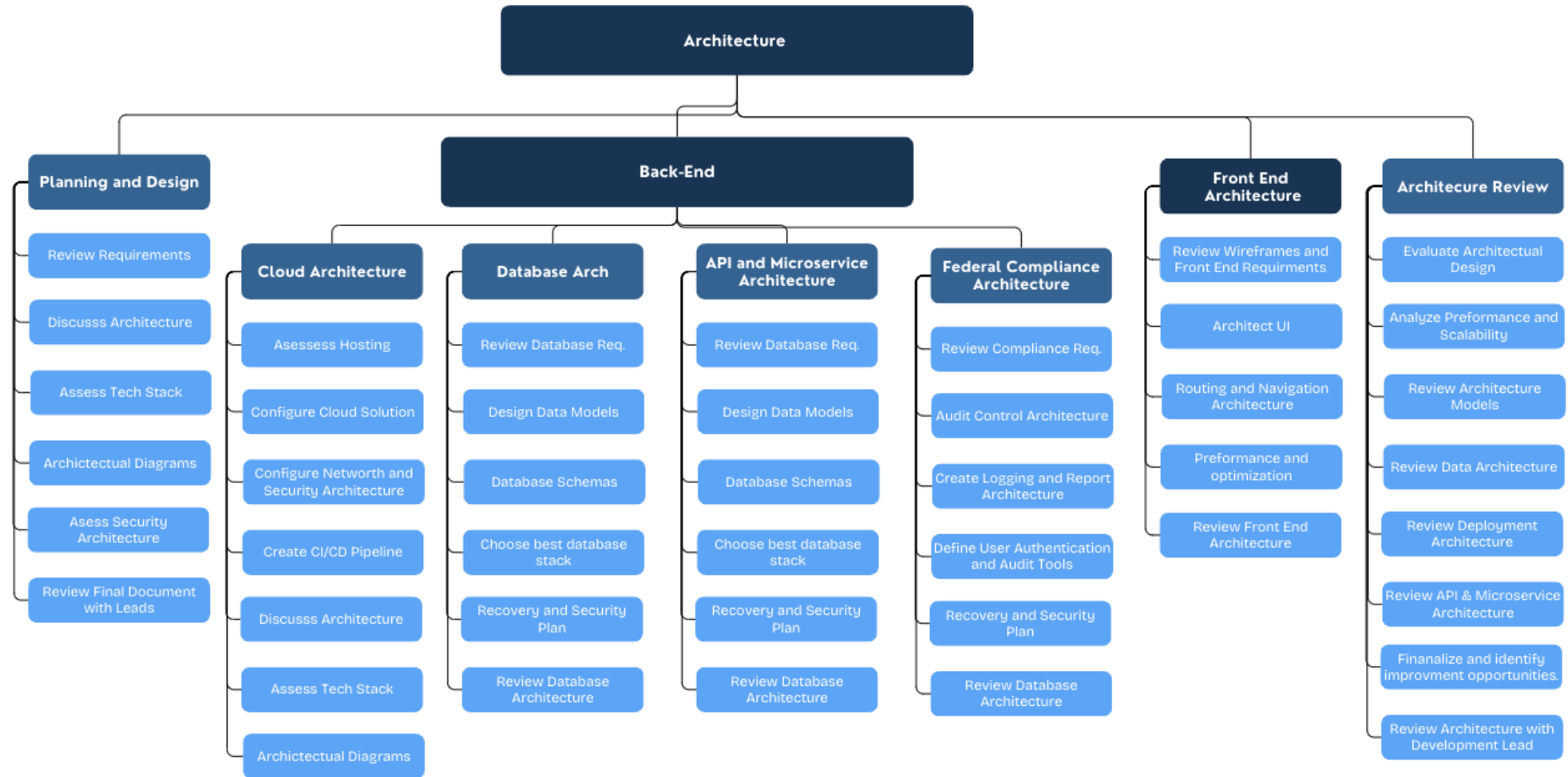
WBS Requirement



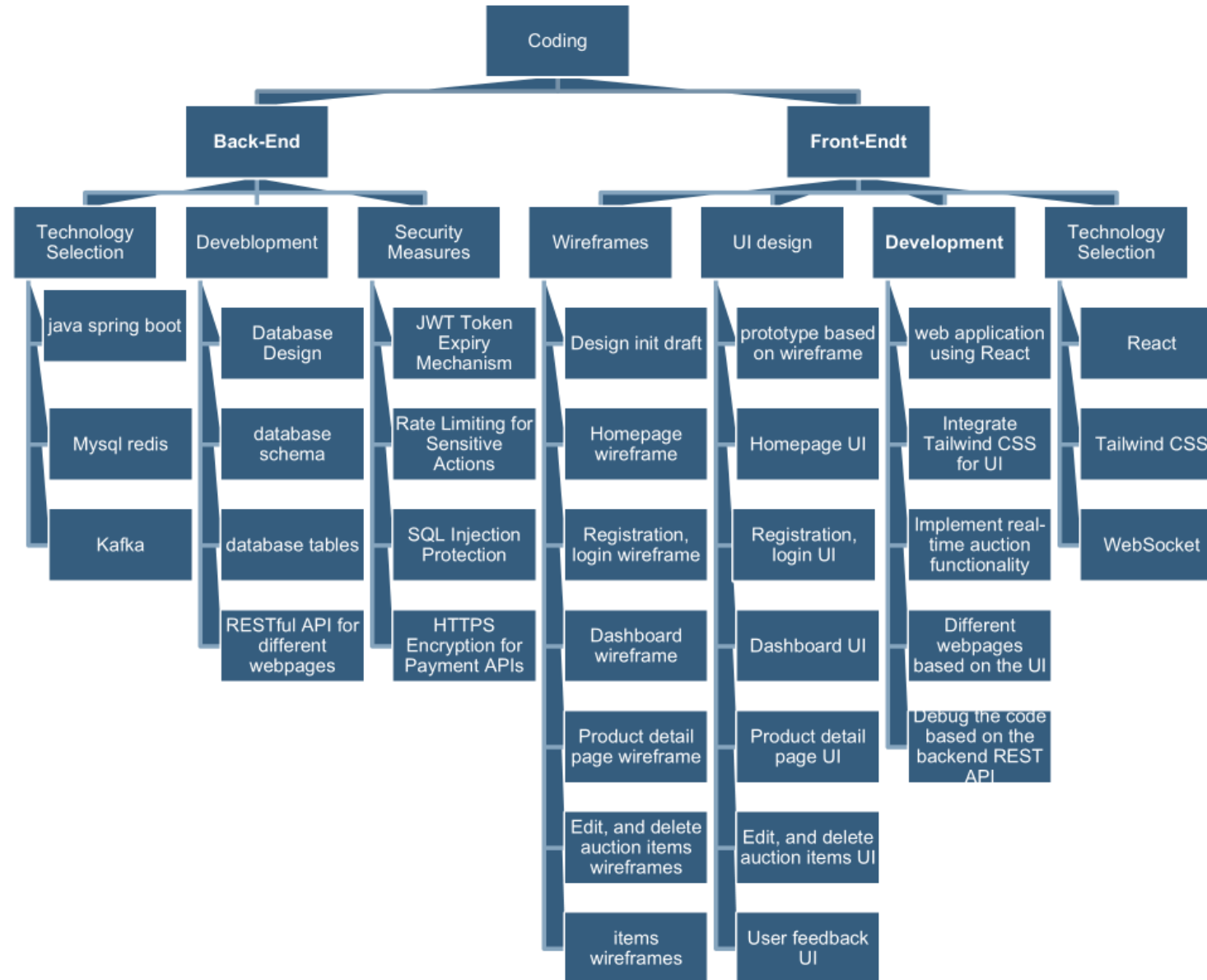
WBS REQUIREMENT



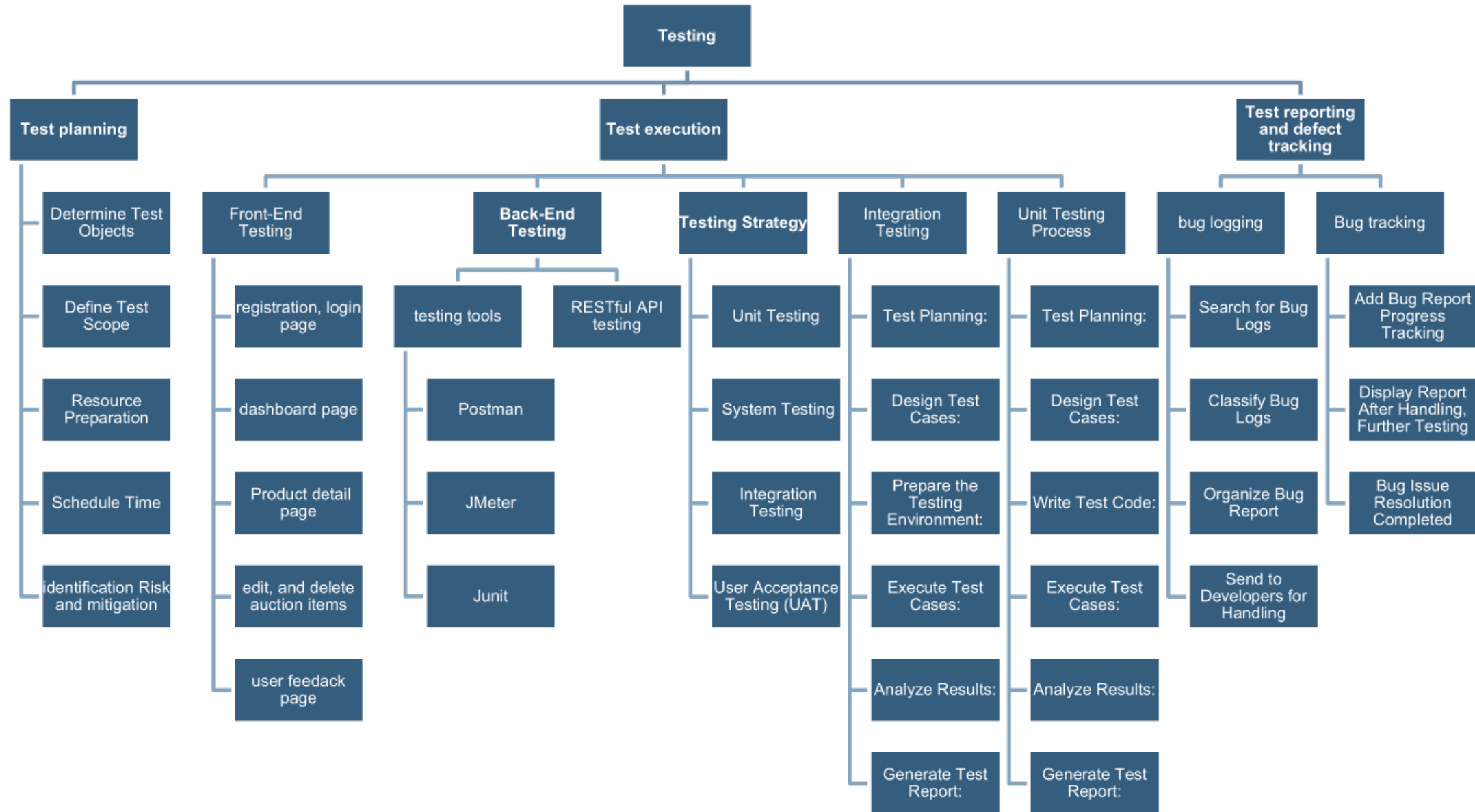
WBS Architecture



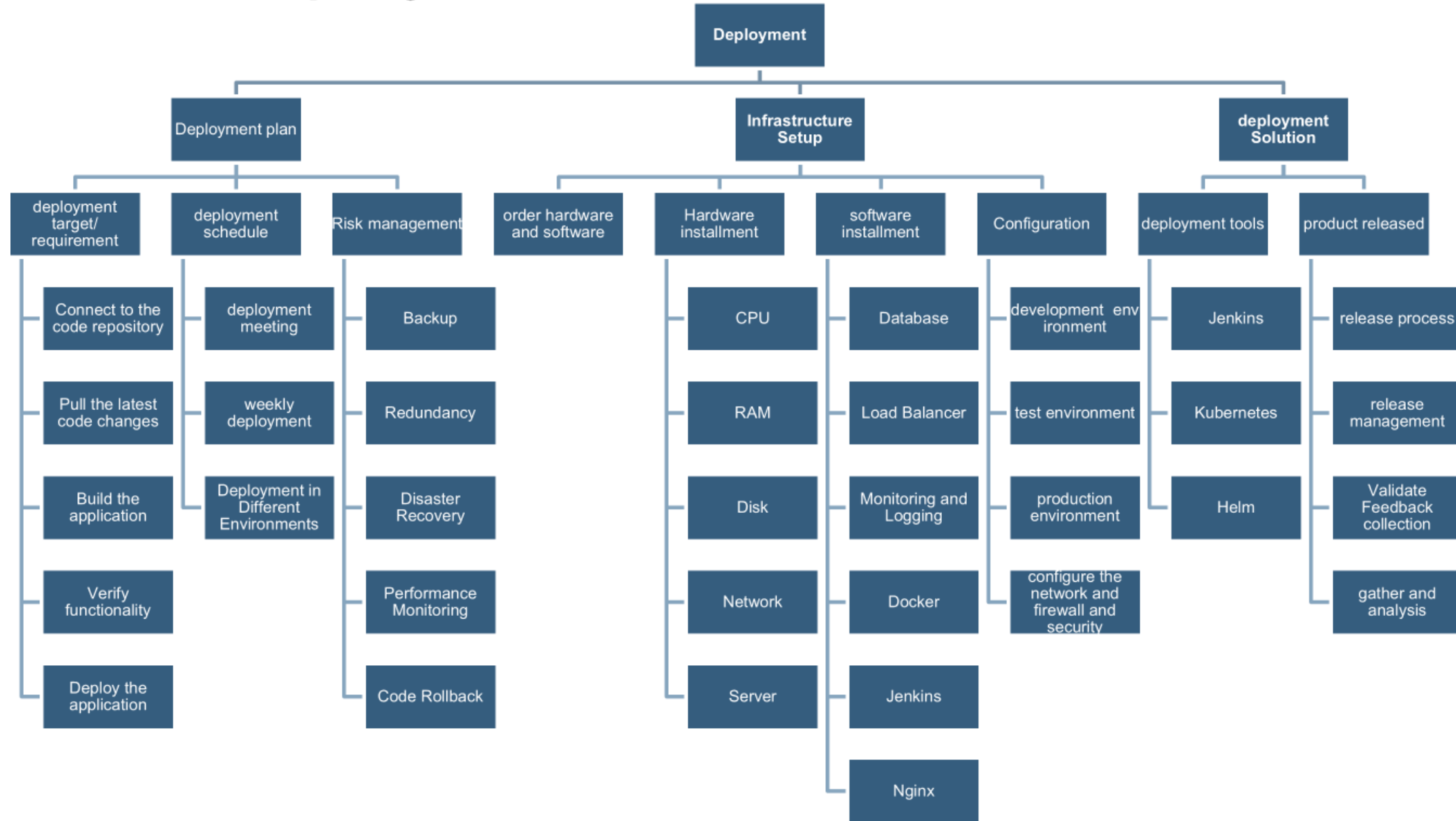
WBS Slide – Coding



WBS Slide – Testing



WBS Slide –Deployment



Cost Comparison Slide Requirements

› Top-Down Cost
– \$169,200.00

› Bottom-up Cost
– \$871,040.00

The cost differences between the Top-Down (TD) estimate, which was set at \$169,200, shows a significant underestimation when compared to the Bottom-Up (BU) estimate, which amounts to \$871,040.

Assumption for the Top-Down Estimate

Simplified Resource utilization assumption The TD estimate assumes that two Requirements Engineers working with a Requirement Lead suffices for the project. In addition the TD allocates less time to review requirements and focuses more on gathering requirements.

Simplified task breakdown: The TD estimate focused on major categories(Tech Stack, Frontend, Backend) without taking accounting for the granularity of the actual tasks required under each category.

What changed in the Bottom-Up Estimate ?

- › High total effort and extended duration: The BU factors in real durations that extend beyond what was estimated for the TU. For example in TU, backend requirements was estimated to take 10 days where as in the BU it is estimated to take 56 days which is more than double. Because of the extended duration and more efforts from resources the cost for the BU is high.
- › More resources utilized: The BU estimate includes more Requirement Engineers(7) working in parallel or together sometimes depending on the tasks. The BU has more time-intensive tasks than the TU and allocates more time to do requirements review.
- › Detailed task breakdown: The BU estimate comes from a more granular breakdown of tasks. Instead of just high-level categories, each task is broken down into more detailed requirement gathering and reviews tasks. Because of the breakdown of tasks, the BU reflects the true work involved.

What is real for the BU ?

- The BU involves Stakeholder Template, Wireframes and App Map Requirements gathering that will add more time when compared to the TU.
- The BU estimates 88 days for Technical requirements gathering which is more than double of what TU estimates(19 days)
- The BU total days comes up to be 102 days which is significantly bigger than the original TU estimate which is 29 days.

Cost Comparison Slide - Architecture

› Top-Down Cost
– \$120,000

› Bottom-up Cost
– \$243,000.00

The cost differences between the Top-Down (TD) estimate, which was set at \$169,200, shows a significant underestimation when compared to the Bottom-Up (BU) estimate, which amounts to \$243,000.000

Assumption for the Top-Down Estimate

Simplified Resource utilization assumption The TD estimate assumes that 2 architecture engineers, a lead and a PM. We did not consider the cloud solutions, database intricacies, and overall sheer volume of work required. When broken down into steps and researched further we discovered various agencies which have requirements of their own for medical software.

Simplified task breakdown: The TD estimate focused on major categories(Tech Stack, Frontend, Backend) without taking accounting for the granularity of the actual tasks required under each category.

› Variance

- What were some of the big changes. Duration, hourly cost, etc
- Roles not accounted for
- Regulations we need to adhere to given we are making software for a medical company
- Additional requirements

Cost Comparison Slide Summary

› Top-Down Cost

- Req : \$169,200.00
- Arch : \$120,000
- Code \$30,000.00
- Test: \$10,000.00
- Deploy:\$20,000.00
- PM : \$63,200.00
- Total Cost: \$349,200.00
- Margin: \$69,840.00
- Price \$419,040.00

› Bottom-up Cost

- Req: \$871,040.00
- Arch : \$243,000
- Code: \$49,800.00
- Test: \$13,120.00
- Deploy:\$13,000.00
- PM : \$316,800.00
- Total Cost: \$1,189,960.00
- Margin: \$237,992.000
- Price: \$1,427,952.00

› Variance

Our **Bottom-Up (BU) cost** comes out to be **\$1,264,387**, which is a **63% increase** when compared to the **Top-Down (TU) cost**. The price difference between BU and TU shows a significant **underestimation of resources and duration** in the TU estimation. Major cost differences were observed across all project phases, with coding costs rising by **147%**, testing costs increasing by **\$103,027**, and project management costs nearly tripling to **\$316,800**. The duration for each phase has doubled or more than doubled. Each phase has increased resources by 15%. Many review tasks (PM tasks) were included in BU, which were not part of TU estimation. More comprehensive testing phases were needed, leading to increased time and cost. Higher complexity in architecture design led to greater effort estimates.

Cost Comparison Slide – Coding

› Top-Down Cost

- Based on the SOW, the Development total estimate cost is **\$30,000**, with the following breakdown for each deliverable:
 - Developer salary: 70%, \$21,000
 - Defect Fixing: 10%, \$3,000
 - Front-end and back-end software purchase costs: 20% \$6,000

› Bottom-up Cost

- Based on the MPP, the total coding cost is **\$49,800**, with the following breakdown for same deliverable:
 - Developer salary: 80%, \$39,840,
 - Defect Fixing: 10%, \$4,980
 - Front-end and back-end software purchase costs: 10% \$4,980

› Variance

- › The total cost exceeds the estimate by **\$19,800**
- › The main cost difference is that for projects with tight deadlines, overtime pay for developers is required, which is three times their regular salary.
- › However, the software purchase cost is reduced.

Cost Comparison Slide – Testing

› Top-Down Cost

- Based on the SOW, the Testing total estimate cost is **\$10,000**, with the following breakdown for each deliverable:
 - Test Planning: 10%, \$1,000
 - Test Front-end and Back-end: 80%, \$8,000
 - Integration Testing: 12%, \$1200

› Bottom-up Cost

- Based on the MPP, the total Testing cost is **\$13,120**, with the following breakdown for same deliverable:
 - Test Planning: 24%, \$3,200
 - Test Front-end and Back-end: 60%, \$8,000
 - Integration Testing: 16%, \$1,920

› Variance

- The total cost exceeds the estimate by \$3,120
- Integration Testing and testing planning took more time

Cost Comparison Slide – Deployment

› Top-Down Cost

- Based on the SOW, the Arch total estimate cost is \$20,000, with the following breakdown for each deliverable:
 - Deploy plan: 20%, \$4,000
 - Infrastructure Setup: 40%, \$8,000
 - configuration : 40%, \$8,000

› Bottom-up Cost

- Based on the MPP, the total Req cost is \$13,000, with the following breakdown for same deliverable:
 - Deploy plan: 27%, \$3,400
 - Infra Setup: 51%, \$6,720
 - configuration: 22%, \$2,880

› Variance

- The total cost reduced the estimate by \$7,000
- The prices of servers and networks have fallen sharply in recent years,
- Optimize the deployment structure to reduce the need for established servers.

Project Key Risks

#	Risk	Mitigation	Contingency	Owner	Due Date	Comments
R1	Task 36 Create Pictures and Video File Storage System Req might be delayed if technical requirements for storage capacity and security are unclear, which could impact the start of Task 59 Wireframes.	Asses the current storage infrastructure and security protocols to ensure they meet the project's goals.	Use an interim cloud storage solution to store and access files until the final system is ready	Anushka	April 15	The primary risk stems from unclear technical requirements , which can impact subsequent tasks like task 59 wireframes
R2	Task 18 Gather Event Information Req might be delayed if stakeholders do not provide complete event details on time, which could impact the start of Task 25 Backend Req.	1. Communicate the importance of timely submission of event details to stakeholders and set clear deadlines for them. Ensure they understand how their delay affects the overall timeline.	Establish a firm deadline for stakeholder responses and send automated reminders and follow up with stakeholders individually to ensure accountability	Anushka	March 29	This is a common issue in projects requiring external input , making proactive engagement crucial

Project Key Risks - Architecture

#	Risk	Mitigation	Contingency	Owner	Due Date	Comments
R3	Task 110 Creating The Architecture For Federal Compliance: HIPPA, FDA, PHI. Agencies may require much more intricate solutions	Ensure all engineers on the project are well informed and provided with detailed specifics of what is required by agencies	Create Architecture ahead of schedule to allow ample time for review.	Manny	Oct 7	Adhering to agencies will always have its intricacies and challenges.
R4	Task 104 Creating API architecture. Vendors may require that API's to access our service adhere to their standard which may significantly vary from company to company.	<ol style="list-style-type: none"> 1. Communicate the importance of reviewing all requirements. 2. Every Architecture section has a dedicated review date to ensure no requirements are forgotten nor looked over 	Have Arch leads review the API's and assess that all requirements are made before delivering to the development team.	Manny	Nov 4	Given multiple vendors will use our platform we need to ensure their data and ours is accessible via well engineered API with all the proper security features and functionality.

Project Key Risks-Coding

#	Risk	Mitigation	Contingency	Owner	Due Date	Comments
R5 .	Task 78- During the development phase, frequent requirement changes occurred as the requirement document was not fully determined. Intensive requirement modifications during development led to significant code adjustments, impacting progress.	M1: Conduct thorough requirement analysis before development and adopt agile development methodologies (Scrum, Kanban) to iterate and minimize the impact of large-scale adjustments. M2: Establish a change control process, where all requirement modifications are documented, evaluated for feasibility, and approved before implementation to prevent uncontrolled changes from disrupting development.		Kailong duan	June25	
R6 .	Task 99- Increasing Code Volume Leading to Poor Readability and Maintainability: As development progresses, the growing codebase results in poor readability, low maintainability, and a lack of documentation.	M1: Implement code reviews to ensure adherence to coding standards and refactor the code in a timely manner to improve maintainability. M2: Encourage comprehensive documentation, ensuring all major components, functions, and complex logic are well-documented, including inline comments and API documentation. M3: Modularize the codebase, breaking it into smaller, reusable, and maintainable modules to reduce complexity and improve readability.		Kailong duan	July 2	

Project Key Risks- Testing

#	Risk	Mitigation	Contingency	Owner	Due Date	Comments
R7	Task 119- Insufficient Test Coverage: Inadequate test case design leads to critical functionalities or edge cases not being tested, affecting product stability.	M1: Add unit tests and supplement with automated testing, ensuring test coverage exceeds 80%. M2: Implement test-driven development (TDD) to write tests before coding, ensuring all functionalities are thoroughly validated. M3: Expand integration and end-to-end (E2E) testing, covering real-world use cases to verify system interactions and user workflows.		Kailong duan	Sep 11	
R8	Task 119- Differences Between Test Environment and Production Environment: Testing results differ between the production environment and the test environment. Different configurations between the two environments lead to successful tests but issues occurring after deployment.	M1: Use configuration management tools (such as Ansible, Terraform) to standardize environment configurations and minimize differences between test and production environments. M2: Implement continuous integration (CI) and continuous deployment (CD) pipelines to ensure that the same code and environment configurations are used in both test and production stages. M3: Regularly perform environment parity checks between test and production environments to identify and address configuration discrepancies.	Monitor and log environment variables and configuration settings in both test and production environments to ensure they align during deployment.	Kailong duan	Sep 11	

Project Key Risks- Deploy

#	Risk	Mitigation	Contingency	Owner	Due Date	Comments
R9	Task 140- Deployment Failure Due to Network Outage or Operational Errors: Deployment fails due to network issues or human error.	M1: Adopt rolling updates, ensuring that the old version remains available and reducing the risk of service interruption. M2: Implement automated deployment, or perform timely code rollback in case of failure to quickly restore the system to a stable state. M3: Enable automatic retries for deployment tasks that fail due to network issues, ensuring the process is resilient to transient failures.	Use blue-green deployment to deploy new versions in parallel with the old ones, allowing for easy rollback without service disruption.	Kailong duan	Sep 2	
R10	Task 140- Deployment Failure Due to Insufficient Resources: Deployment fails because the production environment runs out of resources (e.g., CPU, memory, disk space) during the deployment process.	M1: Implement resource monitoring and alert systems to ensure that resource usage is within acceptable limits before initiating deployment. M2: Scale the infrastructure vertically (e.g., adding more resources) or horizontally (e.g., adding more instances) to ensure sufficient capacity during deployment. M3: Perform load testing in staging environments to ensure that the production environment can handle the resource demands of the new version.	Use container orchestration tools (e.g., Kubernetes) to automatically manage resources and handle failures by redistributing workloads across available nodes.	Kailong duan	Sep 2	

Project Key Actions

#	Description	Originator (Student Name)	Owner	Date Assigned	Date Needed	Date Closed	Comments
A1	Define Required Event Information and share with stakeholder	Anushka	Requirement Lead	April 15	April 17		Collect detail event information and ensure timely sharing with stakeholders to align expectations and next steps.
A2	Identify Storage and Security Requirements	Anushka	Requirement Lead	March 29	April 13		Ensure early alignment with security compliance guidelines
K1	Invite customers and relevant stakeholders to multiple Zoom or phone meetings to clarify requirements as quickly as possible.	kailong duan	PM	June 25	June 20		related to R5
K2	Add various testing methods, including boundary testing, functional testing, and SQL injection prevention.	kailong duan	Testing Lead	Sep 11	Sep 13		related to R7
M1	Identify compliance requirements which involve altering our architecture	Manny Garcia	Arch Lead	Sep 28th	Oct 5th		
M1	Define database requirements regarding a Sql/NoSQL	Manny Garcia	Arch Lead	Oct 9th	Oct 15		

Project Decisions

#	Description	Owner (Student Name)	Decision Date	Comments
D-1	Approved that project would fund to a hire a third-party vendor specialized in legacy database data extraction and integrations to assist with manual data extraction.	Anushka	Mar 9	Decision was made in the meeting steering with the Technical lead on Mar 9
D-2	Approve an increase in the number of test personnel recruitment, as the additional testing requirements exceed the original staffing capacity.	kailong duan	Aug 22	Agreed upon during Technical Meeting on April 1th . Attendees were CTO, VP, PM,CFO,COO, PM, Testing Lead.
D-3	Approve the purchase of sufficient CPUs, hard drives, servers, or the rental of AWS services.	kailong duan	Aug 28	Agreed upon during Technical Meeting on April 5th . Attendees were CEO, CFO, COO, VPs, PM,
D-4	Approve an increase in resources for architecture build out. This included Cloud Engineers, DevOps, and Additional Arch Lead	Manny Garcia	Sep 1	Agreed upon by PM, CTO, and CFO via online meeting.

Stakeholder Table

Stakeholder	Role	Team	Value
Developers & IT Teams	Director of IT	Customer IT	Provides leadership to customer IT team for project engagement and delivery.
Customer Support & Dispute Resolution Team	Director of Development	Client Delivery Team	Provides leadership to development team on technology, resource, and project engagement
Marketing & Sales Teams	Head of Marketing	Marketing team	Collect feedback from different users and develop a smart website promotion strategy
Auditors & Financial Analysts	Operations Manager	Operations team	Coordinate different customers, buyers and sellers, update and feedback their needs to the development department in a timely manner. Ensure smooth integration of the website and operational workflow.
Logistics & Delivery Partners	Logistics Manager	Logistics team	Ensures timely and efficient delivery of auctioned items. Manages shipping, tracking, and delivery operations.
Compliance & Legal Team	Vice President for Legal Affairs.	Compliance and legal team	Ensure that the SMARTBID complies with legal and regulatory requirements, including data privacy laws
Buyers (Bidders)	End Users	General Users	Participate in auctions to purchase items. Provide feedback and influence platform improvements.
Sellers	Auctioneers & Vendors	Seller Network	List and sell items through the auction platform. Provide product details and ensure smooth transactions

Stakeholder Table

Stakeholder	Role	Team	Value
Anushka	Req Lead	Requirements team	is responsible for gathering, documenting, and prioritizing business requirements, ensuring they align with stakeholder needs, and managing changes,
Manuel Garcia	Architecture Lead	Architecture team	focuses on designing the system architecture, selecting appropriate technologies, ensuring scalability, security, and performance, and providing technical leadership to the development team.
Kailong Duan	Dev Lead	Development team	Guides the development team, ensuring the technical direction is aligned with the project goals and company standards.
Kailong Duan	Testing Lead	Testing Team	Leads and motivates the testing team, providing guidance, training, and support to testers. Ensures that the system meets quality standards through comprehensive testing, identifying bugs and issues early, and improving system reliability.
Kailong Duan	Deploy Lead	Deployment Team	developing deployment strategies, guiding the deployment team, ensuring smooth collaboration, resolving technical issues and risks, driving continuous process improvements, ensuring timely and high-quality releases, and coordinating with development, QA, and other teams while reporting progress to stakeholders.

Meeting Minutes (Assignment 2)

Group Number: 10		Project Name: Library Book Sorting	
Project Manager (s): Annie R.			
Meeting Date	Attendees	Absent	Topic Discussed / Work Assigned
Mar 1	Manuel Garcia Anushka Chaudhari Kailong Duan	None	Roles discussed again : as req[Anushka],Archi[Manny],Kailong[Coding,testing,deploy] WBS Discussion Project 2 overview
Mar8	Manuel Garcia Anushka Chaudhari Kailong Duan	None	WBS REQ Done Scheduled Discuss Risks Mitigations Discussed
Mar 9	Manuel Garcia Anushka Chaudhari Kailong Duan	None	Organize project format Action Planned Discussed Governance Plan discussed

Previous Meeting Slides

Group Number: 2		Project Name: SMARTBID 's Auction Platform	
Project Manager (s): Anushka,Kailong Duan, Manny Garcia			
Meeting Date	Attendees	Absent	Topic Discussed / Work Assigned
04-Feb	KailongDuan, Anushka,Manny Garcia	None	We identified the objectives of the assignment and discussed the division of the project, Manny Garcia: Deployment & Architectural Design Kailong Duan: Requirements Engineering & Testing Anushka: Program Management & Implementation/Coding
08-Feb	KailongDuan, Anushka,Manny Garcia	None	Modified the format of the project to clarify the consumer. Start making PPT
10-Feb	KailongDuan, Anushka,	Manny Garcia	Completed the production of ppt, calculated the cost requirements, determined stakeholders and so on
11-Feb	KailongDuan, Anushka, Manny Garcia	None	Complete the project and prepare it for submission.

Previous Assignment Slides

Project Idea Brainstorming

Kailong Duan

› **AI Meeting Comparison**

- › AI meeting assistant for real-time transcription, summaries, and task tracking.

› **Campus Social & Event Hub**

- › A social platform for university students to connect and explore campus events.

› **Anushka Arvind Chaudhari**

› **AI Powered Personal Finance Assistant**

- › AI-powered tool for spending analysis, budgeting, and financial advice.

› **Online Auction Platform : Smartbid**

- › An online auction website.

Manny Garcia

› **Mckesson Contract Software**

- › A software used to bid out medical contracts ensuring the cheapest cost

› **Tesla Rideshare**

- › An uber competitor taking advantage of FSD in states where legal providings

Statement of Work Summary

- › **Project Summary** – A web-based SAAS software to facilitate bidding, financial analysis, and logistics of medical products.
- › **Business Value:** Lower contract cost saves hospitals money on overhead.
- › **Intended Audience:** McKesson and its affiliate medical supply connections.
- › **Why This Solution?** With ever changing regulations and tariffs cost of medical good ebb and flow. In conjunction with increasing medical cost in the U.S. we deemed this project to have real world applications.

Components & Key Features:

- User registration & authentication
- Live bidding functionality
- Secure payment integration
- Seller dashboard for item listings
- Logistics/Shipping Dashboard
- Admin panel for monitoring transactions
- Financial Analysis tool

Cost / Price / Rationale

Cost Overview

- › Development costs : \$100,000
- › Infrastructure & Hosting: \$200,000
- › Security & Compliance:\$50,000
- › UI/UX & Design: \$50,000
- › Project Management : \$50,000
- › Marketing & Operations:\$50,000

- › **Total Cost to Deliver: \$500,000**
- › **Margin (25%): \$125,000**
- › **Total Price to Customer: \$600,000**

- › The total cost is estimated based on key components required to build and deploy the online auction platform. This includes software development, infrastructure setup, security measures, UI/UX design, project management, and ongoing marketing and operational expenses. A 25% margin is added to ensure profitability and sustainability of the business model.