Amazon Bidding

Introduction

In the dynamic world of e-commerce, Amazon Bidding stands out as a game-changer, revolutionizing how consumers interact with online marketplaces. With its huge user base of over 10 billion across various platforms, Amazon has always been synonymous with convenience and reliability. However, with the introduction of Amazon Bidding, the company will elevate its commitment to customer satisfaction, offering a platform where users can not only shop but also engage in thrilling online auctions. Amazon Bidding can combine traditional retail with modern technology, enabling users to bid on a diverse range of products, including the latest offerings from AmazonBasics and items sold by third-party sellers. One of the standout features of Amazon Bidding is its ability to transcend geographical boundaries, providing users from different regions, states, and countries access to a global marketplace. This global reach not only expands the selection of products available, but also fosters a vibrant community of buyers and sellers, enriching the overall shopping experience. Traditional contests organized by local markets or third-party companies often lack guarantees or authentication, leading to potential financial losses and frustration for customers. By creating bidding, Amazon Bidding can prioritize trust, security, and authenticity. In this paper, we performed Amazon's competitive analysis, discussed the full scope of the project, pinpointed all the necessary actions in order to implement the bidding feature on the website, and created a status report for the project.

Competitive Analysis

The main competitors of Amazon are Ebay and Etsy. It is reasonable to compare them because they are the largest e-commerce platforms offering a relatively similar range of products.

Amazon is a global e-commerce giant, known for its extensive product selection, fast shipping, and convenient services like Amazon Prime.

- **User Experience**
  - Amazon primarily focuses on direct sales, offering both individual and professional seller accounts; it operates on a commission-based fee structure.
- **Advantages**
  - **Massive reach**: Amazon's vast customer base provides great exposure for sellers
  - **Prime membership**: Prime offers fast shipping and additional perks
  - **Diverse product range**: Amazon sells a wide range of products, varying from electronics to groceries
- **Challenges**
  - **Competition**: a high number of sellers can make it challenging to stand out
  - **Fees**: Amazon charges fees for listing and selling products

Etsy is a global marketplace where independent artists, crafters, and creators sell their unique and creative goods catering to a niche market, emphasizing unique handmade, vintage, and craft items.

- **User experience**: Etsy fosters a community-driven atmosphere, connecting creative sellers with buyers seeking unique products
- **Advantages**
  - **Craftsmanship**: Etsy encourages creativity and craftsmanship
  - **Niche audience**: buyers specifically seek personalized items
  - **Seller community**: sellers can engage with like-minded creators
- **Challenges**
  - **Fees**: Etsy charges listing fees and transaction fees
  - **Limited scope**: it is not the right platform for mass-produced goods

eBay is an American multinational e-commerce company headquartered in San Jose, California. It operates as a global online marketplace, connecting buyers and sellers in 190 markets worldwide.

- **User experience**: known for its auction-style listings, eBay allows both auction-style and fixed-price sales.
- **Advantages**
  - **Auction format**: sellers can auction items
  - **Variety**: eBay hosts a wide range of products, from collectibles to electronics
  - **Global reach**: it attracts users worldwide
- **Challenges**
  - **Competition**: the concentration of sellers increases the competition
  - **Trust**: some buyers may be more cautious due to the auction format

It appears that Amazon stands as the largest e-commerce platform. While Etsy and eBay have their niches and strengths, Amazon's reach and revenue surpass them both. It dominates in terms of sales and revenue, while Etsy thrives in its niche of unique, handmade goods. eBay remains a versatile platform with both auction-style and fixed-price listings. They all share one challenge in common: because the platforms are very large, the sellers face a lot of competition.

Project Charter

Project Charter is a necessary component for the project implementation because it is needed to authorize the project. It lists all the objectives, scope, deliverables, and the timeline. It serves as a roadmap for the team to follow. The full project charter is posted below.

Project Organization

Project Title	Amazon Bidding
Project Duration	80 days
Project Manager	@VVM
Project Sponsor	Amazon's Product & Marketing Departments

Key Stakeholders

Name	Department	Internal/External
Amazon Marketing Manager	Amazon's Marketing Department	Internal
Amazon Product Manager	Product Management Department	Internal

Project Team

Name	Department	Internal/External
Vlada Chuyasova	Project Management	External
Sanmati Vikas	Project Management	External
Maheswar	Project Management	External

Project Overview
Currently, Amazon does not provide bidding option for its platform users; this project is about implementing bidding on the platform. This addition needs to be implemented, so that Amazon can develop bidding as a new feature. Amazon Bidding would enable Amazon users to bid on the products that Amazon sells. The goal is to build and deliver this project, so that Amazon is able to expand its service offerings, attract new customers, and foster a more engaged user base through bidding activity. On the global scale, it will help Amazon revolutionize the online auction experience by providing a secure, trustworthy, and convenient platform for both buyers and sellers.

Success Metrics

Owner	Goal	How will we measure?
Vlada Chuyasova	To understand the external factors & their impact on Amazon as a company.	Effective PESTEL Analysis
Sanmati Vikas	To measure the supporting factors to achieve the Goal	Effective SWOT Analysis
Maheswar	To communicate Amazon's standing on the market, its goals, and the reasons why it would be beneficial to implement bidding feature	Stakeholder Analysis

Scope of Work

In-Scope	
Owner/Team	**Description**
Product Management Team + UX Research Team	• User Feedback through MVP: Implementing an MVP (Minimum Viable Product) allows for user feedback and product validation before committing additional resources. This step helps in identifying issues early on and avoiding costly redirection or rework during later development stages
Software Department	• Building the bidding feature on the platform • Development and maintenance of the bidding platform itself, including features such as product listings, bidding mechanics, user accounts, and payment processing.
Analytics Department	• Collection and analysis of data related to bidding activities, such as bid histories, winning bids, and user engagement metrics, to inform decision-making and improve platform performance.
IT Department	• Provision of customer support channels, such as email support or live chat, to assist users with inquiries, issues, or concerns related to the bidding platform.

Out of Scope	
Owner/Team	**Description**
Amazon's Legal Team	• Potential legal issues
Marketing Department	• Marketing strategies: Comprehensive marketing strategies beyond basic promotion of the bidding platform.
Product Finance Department	• Direct negotiations between sellers and customers

Deliverables

Team 1	
Dates	**Event**
16 March 2024	• Presenting the initial Project Report • Review and Analysis for the further process • Implementation of the Changes

Milestones

Date	Event
16 March 2024	We have completed the Value and vision for the project.
16 March 2024	Achieved two competitive analyses (PESTEL & SWOT)
16 March 2024	Presentation of the 2 of Amazon's competitors

Risks & Issues

Potential Risk	Perceived Impact	Mitigation Strategy
Compatibility Issue	Potentially becoming an unsuccessful feature that leads to company's losses	Perform an extensive research and derive expected statistics on if the feature will be successful
High Competition	Intense competition from other bidding platforms or e-commerce websites like E-bay	Continuously monitor competitors and adapt strategies to stay competitive.
Regulatory Compliance	Failure to comply with regulations related to online bidding, consumer protection, or data privacy could lead to fines, legal actions, or even shutdown of the platform.	Pre-studying the laws and requirements regarding the process of bidding and consumer protection and strictly complying with the guidelines

Sign-Off

Approved	Date	Name
Project Manager	3/16/2024	@VVM

Acceptance Criteria

Registration

- **AC 1.1:** Users can successfully register for a new account using their name, email address, and a secure password.
- **AC 1.2:** Users can log in to the application using their existing Amazon account credentials.
- **AC 1.3:** The application validates user input during registration (e.g., email format, password strength).

Product Browsing

- **AC 2.1:** Users can browse a complete list of all available products for bidding.
- **AC 2.2:** Products can be filtered by category (e.g., electronics, clothing), brand, price range, and other relevant attributes.
- **AC 2.3:** Each product listing displays detailed information including a description, high-quality images, and seller details (for third-party sellers).

Bidding

- **AC 3.1:** Users can place bids on products they are interested in.
- **AC 3.2:** The application clearly displays the current highest bid and the minimum bidding increment for each product.

- **AC 3.3:** Users can view their own bidding history, including past bids and the status of each bid (active, outbid, winner).
- **AC 3.4:** Users receive timely notifications when they are outbid on a product or win an auction.

Bidding Rules

- **AC 4.1:** The application enforces a minimum bidding increment to prevent unreasonably low bids.
- **AC 4.2:** A maximum bidding limit is set to avoid excessively high bids.
- **AC 4.3:** Bidding closes at a predefined time and date for each product, displayed clearly on the product listing.

Bidding Outcomes

- **AC 5.1:** Winners of auctions are notified immediately after the bidding closes, with clear instructions on how to complete the purchase.
- **AC 5.2 (Optional):** Users who are outbid by a significant margin can be notified (configurable option).
- **AC 5.3:** Winners can seamlessly complete the purchase process through a secure payment gateway and provide shipping details.

System Functionality

Security

- **AC 6.1:** User accounts and data are protected with secure authentication protocols (e.g., two-factor authentication).
- **AC 6.2:** All data transmission, including financial transactions, uses secure encryption standards (e.g., HTTPS).
- **AC 6.3:** The application complies with industry security standards for payment processing (e.g., PCI-DSS).

Performance

- **AC 7.1:** The application can handle a high volume of concurrent users and bids without experiencing significant lag or downtime.
- **AC 7.2:** Bidding results (current highest bid, outbid notifications, etc.) are updated in real-time for a smooth user experience.

Scalability

- **AC 8.1:** The system is designed to be easily scalable to accommodate an increasing number of users and products as the platform grows.

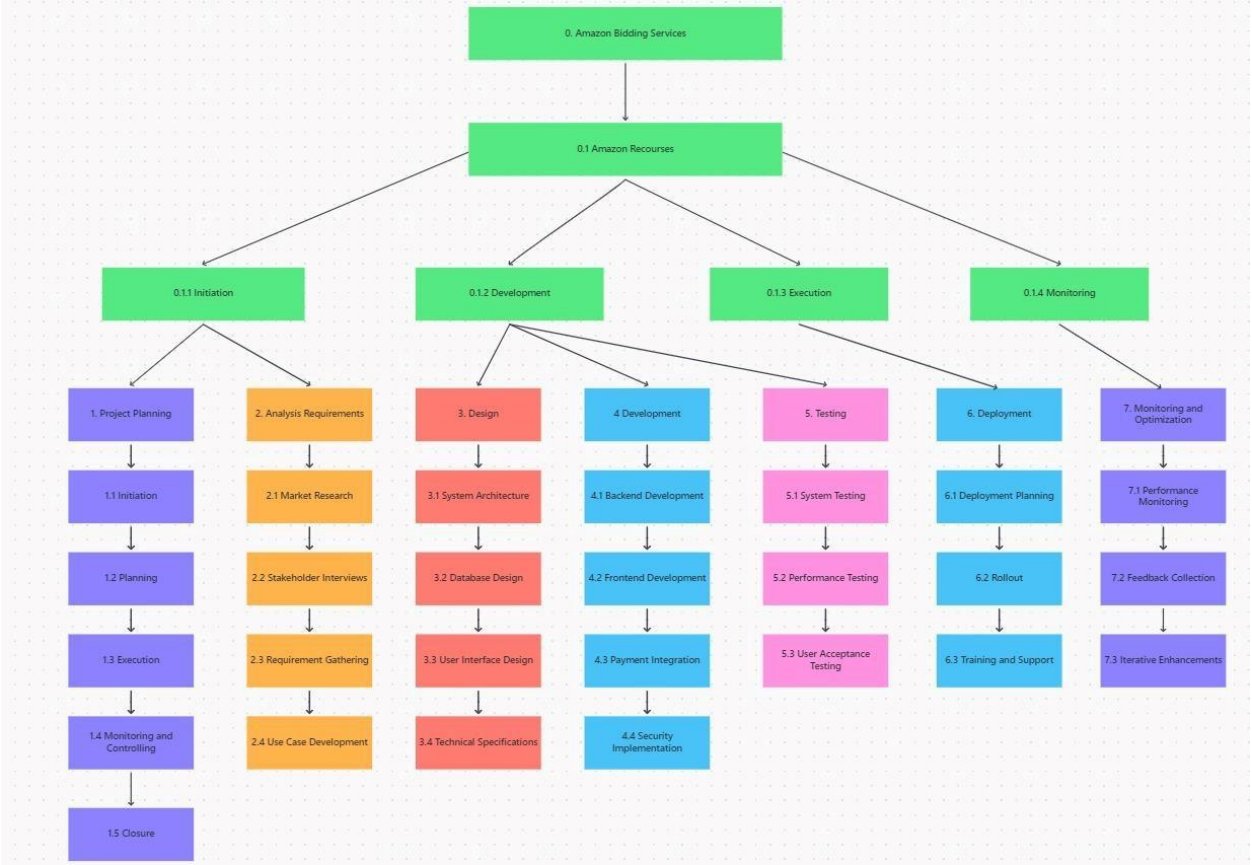
Reporting

- **AC 9.1:** The system generates comprehensive reports on bidding activity, including the number of bids placed, auction results (winners, losers), and user engagement metrics.
- **AC 9.2:** Reports are easily accessible and can be used to analyze user behavior and optimize the bidding platform for better user experience and business goals.

Additional Considerations

- **AC 10.1:** The application integrates seamlessly with existing Amazon systems for product data, user accounts, and payment processing.
- **AC 10.2:** Robust measures are implemented to detect and prevent fraudulent bidding activity.
- **AC 10.3:** The application is fully responsive and user-friendly on mobile devices (smartphones, tablets).
- **AC 10.4:** The application undergoes thorough testing to ensure all functionalities work as intended and meet acceptance criteria.

Work Breakdown Structure



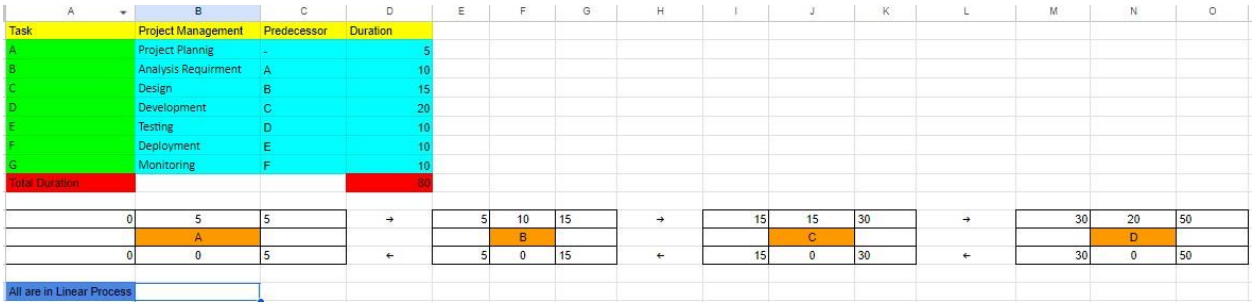
The above picture represents the work breakdown structure. It can be observed that in order to create amazon bidding successfully, work should be divided into different processes, which are categorized into four main sub structures followed by five different micro sub structures. Such categories include Initiation, Development, Execution and Monitoring; these categories are addressed by 0.1.

There are several reasons for doing work breakdown structure.

1. Scope Definition
    a. The WBS breaks down the project scope into manageable components
    b. It provides clarity on what needs to be accomplished

2. Resource Allocation
    a. It facilitates more accurate resource allocation and scheduling by assigning specific resources to individual work packages
3. Risk Management
    a. It helps identify and assess risks at a detailed level
    b. It enables proactive risk management strategies to be developed and implemented
4. Communication
    a. It serves as a visual communication tool, helping all the stakeholders understand project scope, objectives, and progress more effectively
5. Performance Measurement
    a. The WBS forms the basis for performance measurement and reporting, allowing project managers to track progress of the project, identify variances, and take corrective actions as needed

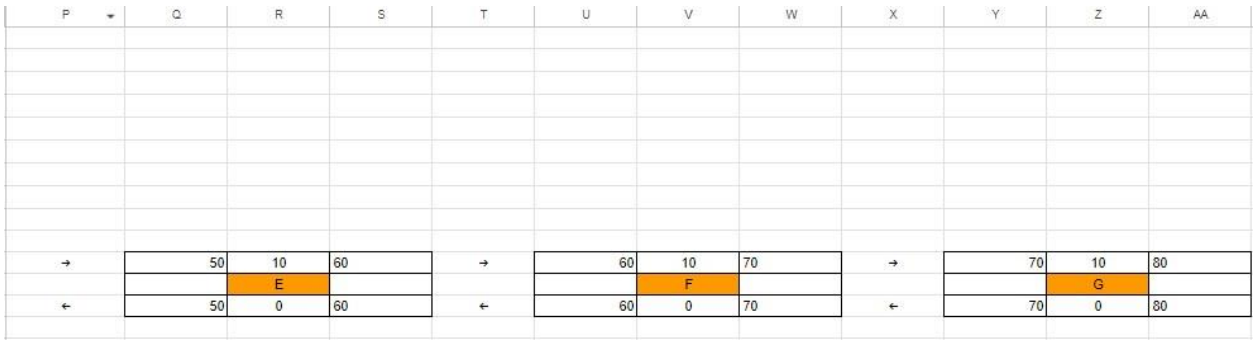
Network Diagram



Task	Project Management	Predecessor	Duration
A	Project Plannig	-	5
B	Analysis Requirment	A	10
C	Design	B	15
D	Development	C	20
E	Testing	D	10
F	Deployment	E	10
G	Monitoring	F	10
Total Duration			80

0	5	5	→	5	10	15	→	15	15	30	→	30	20	50
	A				B				C				D	
0	0	5	←	5	0	15	←	15	0	30	←	30	0	50

All are in Linear Process

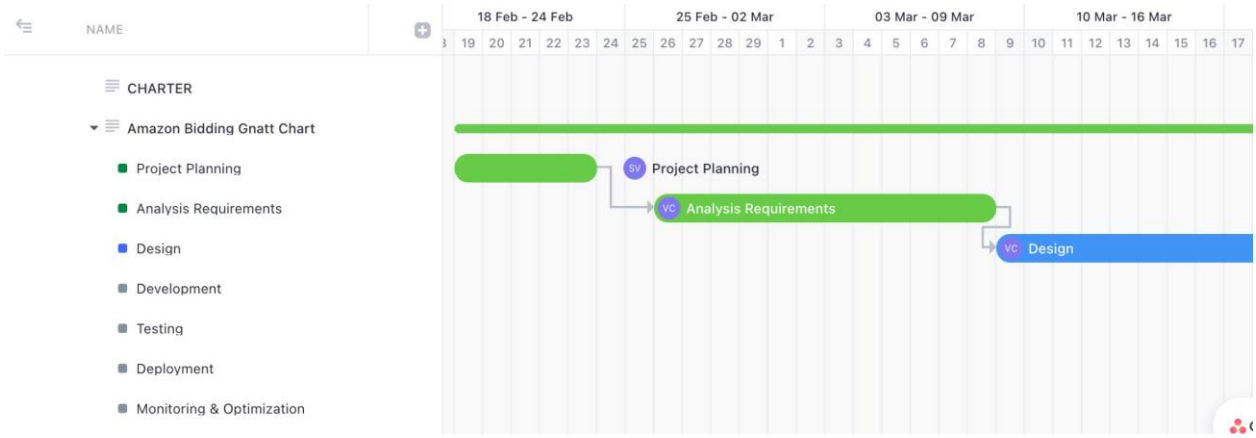


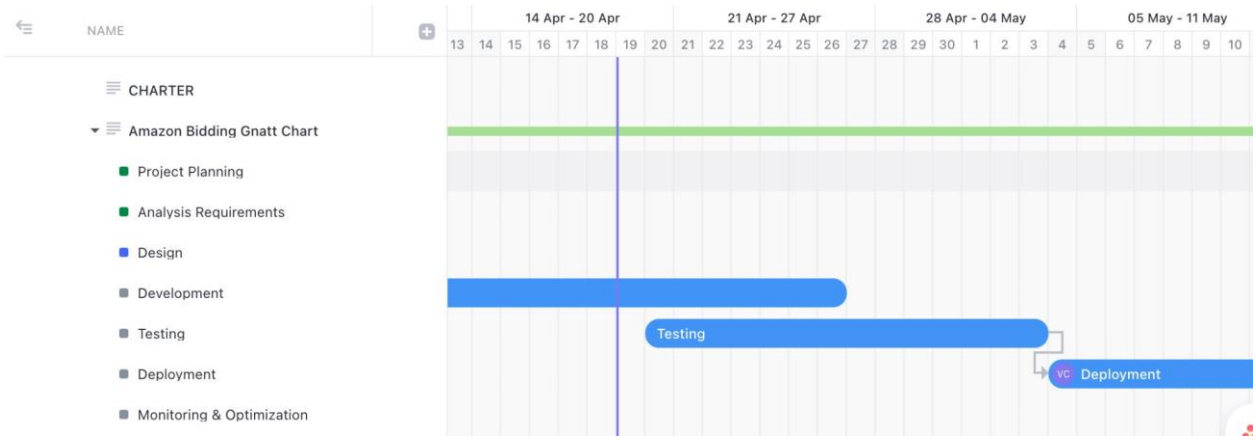
P	Q	R	S	T	U	V	W	X	Y	Z	AA
→	50	10	60	→	60	10	70	→	70	10	80
		E				F				G	
←	50	0	60	←	60	0	70	←	70	0	80

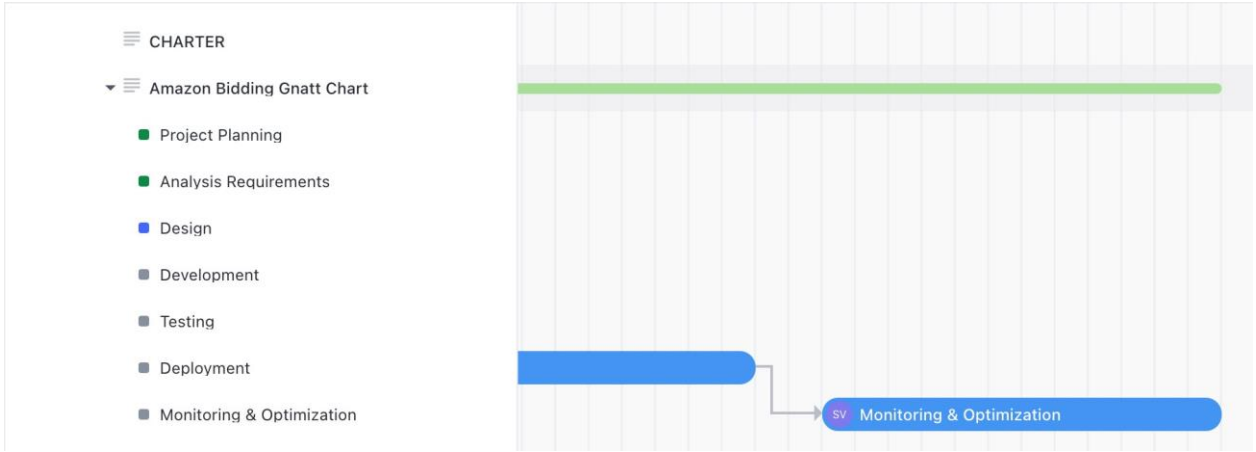
The above pictures depict the presentation of the Network diagram. The flow of the process is linear. We have considered mainly project planning, Analysis Requirement, Design, Development, Deployment and Monitoring. Process follows as water flow. Total number of hours estimated for the project is 80 hrs; when it is split accordingly each subdivisions gets 5, 10, 15, 20, 10, 10 and 10 hours respectively. The purpose of a network diagram in project management is to visually illustrate the sequence of activities, dependencies, and critical path within a project, focusing on planning, scheduling, and monitoring project progress.

Gantt Chart

Gantt chart helped our team to plan, schedule, and potentially monitor our project. The duration of the project is 80 days. The left column lists all of the stages of the project. The right side shows the timeline and the teams working on specific stages of the project. The Gantt chart perfectly represents the timeline, starting from the project planning stage, and finishing up with the monitoring and optimization stage of the project.







Full Budget Analysis & Human Resources

Budget analysis is an extremely important aspect of the project because it involves estimating the costs associated with a project. In our project, project managers should allocate resources effectively and create a realistic budget. The budget acts as a baseline against which

actual costs are measured during project execution. On top of that, budget analysis helps allocate resources efficiently. It ensures that funds are available for labor and other project needs. It is important to note that during the actual project implementation, decisions related to scope change, which may impact the initially established budget.

In order to estimate the budget for our project, we had to make certain calculations. Firstly, we determined that there will be 22 people working on the project. This includes the project management team, design team, developer team, and support. The table below shows every worker involved in the project, their roles, numbers of hours each worker would have to spend, and their average salary per hour. After calculating all the costs using bottom-up cost estimation, we decided to allocate $120,000 as a budget for this project.

Categories	# of people	# days of work	Position Level 3	Position Level 2	Position Level 1
Project Planning	3	5	Project Manager, Software Architect	UI Designer, Full Stack Developer-1,2	
Analysis Requirment	3	10	Data Scientist, Project Manager	Data Analyst	
Design	3	15	Project Manager	UI Designer, Ux Research	
Development	4	20	Software Architect,Project Manager	Full Stack Developer-1,2	
Testing	2	10	Project Manager	Test Engineer	
Deployment	3	10	Project Manager	Deployment Engineer, Full Stack Developer-2	
Monitoring	4	10	Project Manager	Support Engineer, Tech Support	Intern-1
Total:	22	80			

Job Role	Number of Hours per day	Cost per hours($)	Total Number of hours	Total Cost $ till the Project ends (80 days)
Project Manager	8	40	640	25,600
Software Architect	8	45	200	9,000
UI Designer	8	40	160	6,400
Full Stack Developer-1	8	40	200	8,000
Full Stack Developer-2	8	40	280	11,200
Data Scientist	8	40	80	3,200
Data Analyst	8	40	80	3,200
UX Research	8	40	120	4,800
Test Engineer	8	42	80	3,360
Deployment Engineer	8	42	80	3,360
Support Engineer	8	35	80	2,800
Tech Support	8	35	80	2,800
Intern-1	8	30	80	2400
Total:	104	509	2160	86,120
Contingency (10%)				8,612
Total Project Cost				94,732

Number of Roles invloved in the project: **13**
The budget allocated for the project: **120,000 $**
Total Amount to be used: **94,732 $**

Estimation Method:
This cost estimation uses a bottom-up approach

Communication

During this project, our team used a collaborative approach. This project consisted of the smaller tasks that we had to accomplish; before we proceeded with the completion, we would thoroughly discuss what the objectives were, and what exactly we had to do. Then, we would either assign separate responsibilities for each other or we would work together to solve a particular problem. In cases where we separated the tasks, we made sure to check on progress and on quality control consistently. Everyone was involved in the decision-making. We maintained an open and constructive communication throughout the duration of the project, and there were no conflicts during the team's collaboration. We believe that shared goals and vision played an important role in successful teamwork. Everyone was aware of the goals we had to achieve, and it seemed like each team member was motivated enough to strive to perform well.

Risk Management Plan

1. **User Management Risks**
    - **Risk 1.1:** Fraudulent User Accounts: Malicious actors could create fake accounts to manipulate bids, inflate prices, or steal user data.
    - **Mitigation 1.1.1:** Implement strong user authentication protocols like two-factor authentication (2FA) to verify user identity during login attempts.
    - **Mitigation 1.1.2:** Enforce user verification during registration (e.g., email confirmation, phone number verification).
    - **Mitigation 1.1.3:** Continuously monitor user activity for suspicious patterns (e.g., sudden account creation followed by aggressive bidding). Implement fraud detection mechanisms to identify and block suspicious accounts.

2. **Bidding Process Risks**

- **Risk 2.1:** Shill Bidding: Sellers or associates could create fake accounts to inflate the price of their own products.
- **Mitigation 2.1.1:** Analyze bidding patterns for irregularities such as sudden spikes in bids from newly created accounts on the same item.
- **Mitigation 2.1.2:** Implement bidding limits per user or item to prevent excessive bids that could be outliers.
- **Mitigation 2.1.3:** Allow users to report suspicious bidding activity through a designated channel for investigation.
- **Risk 2.2:** Bid Sniping: Users could place last-minute high bids to unfairly win auctions from other interested bidders.
- **Mitigation 2.2.1 (Optional):** Consider implementing an automatic bid extension feature. If a bid is placed in the final seconds of an auction, the auction timer could be extended for a short period to allow other bidders to react.
- **Mitigation 2.2.2:** Allow users to set a maximum bid that the application will automatically place in the final moments of the auction, up to their specified limit.
- **Risk 2.3:** User Misunderstanding of Bidding Rules: Users may not fully understand the bidding process or rules, leading to confusion or frustration.
- **Mitigation 2.3.1:** Clearly display bidding rules and functionalities within the application interface.
- **Mitigation 2.3.2:** Develop comprehensive tutorials or FAQs to educate users on the bidding process, acceptable behavior, and potential risks.

3. **Payment Processing Risks**

    - **Risk 3.1:** Payment Information Compromise: User payment information could be intercepted during transactions if not adequately secured.
    - **Mitigation 3.1.1:** Ensure secure payment processing with industry-standard encryption (e.g., PCI-DSS compliance) to protect sensitive data.
    - **Mitigation 3.1.2:** Partner with a reputable payment gateway provider that adheres to strict security protocols.
    - **Mitigation 3.1.3:** Store user payment information securely using industry best practices (e.g., tokenization).
    - **Risk 3.2:** Non-Payment by Bid Winners: Bidders may win auctions but fail to fulfill their payment obligations.
    - **Mitigation 3.2.1:** Require a valid payment method linked to the user account before allowing users to participate in bidding.
    - **Mitigation 3.2.2:** Implement a reputation system where users with a history of non-payment face restrictions (e.g., limited bidding privileges).
    - **Mitigation 3.2.3 (Optional):** Consider requiring a refundable deposit for high-value items to discourage non-serious bidders.

4. **System Risks**

    - **Risk 4.1:** System Performance Issues: The application may experience technical difficulties during peak bidding times, leading to frustration and lost opportunities for users.
    - **Mitigation 4.1.1:** Conduct thorough performance testing to ensure the system can handle anticipated user volumes and bidding activity.
    - **Mitigation 4.1.2:** Implement a robust and scalable infrastructure that can accommodate future growth in users and bids.

- **Mitigation 4.1.3:** Develop a disaster recovery plan to address potential outages and minimize downtime.
- **Risk 4.2:** Security Vulnerabilities: Hackers could exploit vulnerabilities in the application to gain unauthorized access to user data or manipulate the bidding process.
- **Mitigation 4.2.1:** Conduct regular security audits and penetration testing to identify and fix vulnerabilities in the application code.
- **Mitigation 4.2.2:** Maintain the application software with the latest security patches to address newly discovered vulnerabilities.
- **Mitigation 4.2.3:** Implement secure data storage practices to protect sensitive user information.

5. **Data Management Risks**

- **Mitigation 5.1.1:** Implement data encryption at rest and in transit using industry-standard algorithms.
- **Mitigation 5.1.2:** Limit access to user data based on the principle of least privilege, granting access only to authorized personnel who require it for specific job functions.
- **Mitigation 5.1.3:** Comply with all relevant data privacy regulations (e.g., GDPR, CCPA) regarding user data collection, storage, and usage.

Additional Considerations

- **Legal and Regulatory Risks**
  - Ensure the application complies with all applicable laws and regulations governing online auctions, consumer protection, and data privacy. This may involve consulting legal counsel to ensure proper adherence.

- **Reputational Risk**
    - Implement measures to prevent fraudulent activity and maintain a fair bidding environment. A positive user experience and reputation are crucial for the success of the platform.
- **Dispute Resolution**
    - Establish a clear and efficient process for resolving disputes between buyers and sellers. This could include a dedicated customer support channel, mediation mechanisms, or a clear escalation path for unresolved issues.

Risk Management Process

- This risk management plan will be a living document, reviewed and updated periodically as the application evolves and new risks emerge.
- A risk management committee will be established to oversee the implementation and effectiveness of mitigation strategies.
- Regular risk assessments will be conducted to identify new or changing threats.
- Incident response protocols will be established to address security breaches, data leaks, or other unforeseen events.

By proactively identifying potential risks and implementing effective mitigation strategies, we can create a secure, trustworthy, and enjoyable bidding experience for Amazon customers using the Amazon Bidding application.

Status Report

Design: This task is in progress with urgent priority, under the category "Pricing." It has subtasks including Private task and Private task, both of which are pending.

Development: Assigned to @Maheswar Barrenkala, this task is pending with high priority, categorized under "Market Positioning and Messaging."

Testing: This task is also pending with high priority, scheduled to start today.

Deployment: Assigned to you, this task is pending and scheduled to start on May 4, 2024.

Monitoring & Optimization: Assigned to @Sanmati Vikas, this task is pending under the category "Sales Strategy," with a start date of May 20, 2024.

Current Progress

- Initiation Phase: completed
- Development Phase: ongoing
- Execution Phase: pending
- Monitoring Phase: not started

Accomplishments

- Defined project scope and objectives
- Conducted competitive analysis of e-commerce platforms
- Developed project charter, work breakdown structure, and risk management plan
- Identified acceptance criteria for key features
- Established communication protocols within the team
- Addressed potential risks and mitigation strategies

Challenges

- Integration with existing Amazon systems requires thorough testing and coordination
- Ensuring user understanding of bidding rules and processes
- Mitigating risks related to payment processing and system performance

Next Steps

- Complete development of key features: registration, product browsing, and bidding
- Implement security measures and conduct performance testing
- Integrate payment processing system and ensure compliance with industry standards
- Develop comprehensive user guides and tutorials for bidding process
- Begin monitoring phase to track project progress and address any issues

Monitoring

1. It is important to arrange for the project team to meet once a week or every two weeks to discuss assignments and milestones and talk about any difficulties or obstacles you've run into and work together to find answers.
2. The team should keep tabs on the progress of individual tasks and deliverables, make use of project management software or other tools. To guarantee timely progress, the team should assign duties and deadlines, track task completion rates, and keep an eye on progress.
3. The team should compare deliverables to the acceptance criteria and make any required modifications.

4. The team should keep an eye on project expenses in relation to the budgeted amount; maintain a record of the money spent on supplies, machinery, software licensing, and other project-related costs.
5. To guarantee the best possible use of staff, equipment, and other resources, the team needs to evaluate resource allocation and utilization on a regular basis. Resolve any bottlenecks or resource limitations that might be affecting the project's progress.
6. The team has to keep lines of communication open and transparent with all parties involved in the project, such as the team, management, clients, and vendors.
7. The team has to implement quality assurance procedures to make sure deliverables adhere to predetermined guidelines and specifications.
8. It would be useful to establish and monitor key performance indicators (KPIs) that are pertinent to the goals of the project. To determine the effectiveness of a project and pinpoint areas for improvement, the team should measure variables including customer happiness, system performance, and user engagement.
9. The team should keep all project documentation, such as risk registers, status reports, minutes from meetings, and project plans, correct and up to date. It is also essential to make sure that, when needed, all stakeholders have access to pertinent project information.

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