

System Analysis and Design for Elite Arts

GROUP C :Champion Consulting

Kalyani Mishra
Disha Shetty
Shruti Bhatnagar
Monika Giri

Topics to be discussed today:

1. Introduction to the project
2. SWOT analysis and problem statement
3. WBS
4. Risk register
5. Interview questions
6. Use cases
7. Entity Relationship Diagram
8. User Stories
9. Test Plans
10. Next steps

1. Introduction to the project

- Champion Consultancy thrives to provide the latest technological solutions that are cost-efficient, on schedule and meet the organization's strategic goals.
- Our team of consultants have analyzed Elite Arts' requirements, perform background tasks of identifying, comparing and shortlisting the cloud solutions that will meet the specific requirements of the Elite Art Products.

● Organizational Goals:

- Improved relationship with artists
- Improvement of store finances
- Ease of use
- Clear project completion timeline



2. SWOT analysis and problem statement

SWOT Analysis of Cloud System

Strength

- Streamlined Operational Workflow
- Well-defined Project Scope
- Clear estimation of cost and time
- Digitization of the record
- Overall Solution aligns with organization's strategy

Weakness

- Train employees on the new system
- Limited scope of customization
- Additional hardware and software cost
- Recurring costs for the system maintenance

Opportunities

- BI for business expansion
- Collaboration with other businesses
- Improved customer experience
- Expansion of customer base

Threats

- Unable to get ROI
- Endangering Customer Engagement
- Unable to match the competitor's service
- Rejecting the build solution

Problem Statement

“Proper implementation of a user-friendly store management system would improve the store employees as well as customer experience by 70%. It would be possible to keep track of inventory, budget, customer accounts, point-of-sale, accounts payable, and accounts receivable.”

We agree that because of the lack of well developed IT infrastructure, a cloud solution would be feasible, accessible from any location/device and cost-effective approach.

Work breakdown Structure

		Name	Duration	Start	Finish	Predecessors	Resource Names	S
1		Store Management System	119 days?	8/1/21 8:00 AM	1/13/22 5:00 PM			
2		1.0 - Initialize and Conceptualize New task	21 days	8/2/21 8:00 AM	8/30/21 5:00 PM			
3		1.1 - Create Business Case	10 days	8/2/21 8:00 AM	8/13/21 5:00 PM		Andrew Simonds	
4		1.2 - Identify 3rd party vendor	9 days	8/16/21 8:00 AM	8/26/21 5:00 PM	3	Jennifer Roberts	
5		1.3 - Present proposal to governing partner for Approval	2 days	8/27/21 8:00 AM	8/30/21 5:00 PM	3;4	Emily Webber	
6		1.4 - Milestone: Initialization Phase Complete	0 days	8/30/21 5:00 PM	8/30/21 5:00 PM	5		
7		2.0 - Project Charter and Planning	14 days	8/31/21 8:00 AM	9/17/21 5:00 PM	6		
8		2.1 - Develop Project Charter	4 days	8/31/21 8:00 AM	9/3/21 5:00 PM	6	Emily Webber	
9		2.2 - Plan Schedule	7 days	9/6/21 8:00 AM	9/14/21 5:00 PM	8	Andrew Simonds	
10		2.3 - Defining Scope	2 days	9/6/21 8:00 AM	9/7/21 5:00 PM	8	Jennifer Roberts[50...	
11		2.4 - Plan Resources	2 days	9/6/21 8:00 AM	9/7/21 5:00 PM	8	Jennifer Roberts	
12		2.5 - Plan Budget	4 days	9/8/21 8:00 AM	9/13/21 5:00 PM	8;10;11	Emily Webber	
13		2.6 - Plan Risk Management and Mitigation	2 days	9/6/21 8:00 AM	9/7/21 5:00 PM	8	Andrew Simonds	
14		2.7 - Plan Change and Configuration	4 days	9/6/21 8:00 AM	9/9/21 5:00 PM	8	Jennifer Roberts	
15		2.8 - Plan Quality Assurance	3 days	9/6/21 8:00 AM	9/8/21 5:00 PM	8	Emily Webber	
16		2.9 - Present Project Plan proposal to governing partner for Approval	2 days	9/15/21 8:00 AM	9/16/21 5:00 PM	8;9;10;11;12;13;14;15	Andrew Simonds	
17		2.10 - Arrange Project Kick off Meeting	1 day	9/17/21 8:00 AM	9/17/21 5:00 PM	16	Jennifer Roberts	
18		2.11 - Milestone: Project Planning Phase Completed	0 days	9/16/21 5:00 PM	9/16/21 5:00 PM	16		
19		3.0 - Analysis	9 days	9/17/21 8:00 AM	9/29/21 5:00 PM	16		
20		3.1 - Business Requirement Specification	4 days	9/17/21 8:00 AM	9/22/21 5:00 PM	16	Richard Smith	
21		3.2 - Functional Requirement Specification	4 days	9/23/21 8:00 AM	9/28/21 5:00 PM	20	Scott Davis	
22		3.3 - Technical Requirement Specification	3 days	9/23/21 8:00 AM	9/27/21 5:00 PM	20	Michelle Barns	
23		3.4 - Requirement Walkthrough	2 days	9/28/21 8:00 AM	9/29/21 5:00 PM	22	Michelle Barns	
24		3.5 - Milestone: Requirement Sign Off	0 days	9/29/21 5:00 PM	9/29/21 5:00 PM	23		
25		4.0 - Design	10 days	9/30/21 8:00 AM	10/13/21 5:00 P...	23		
26		4.1 - High Level Design	3 days	9/30/21 8:00 AM	10/4/21 5:00 PM	23	Richard Smith	
27		4.2 - Detailed Design	5 days	10/5/21 8:00 AM	10/11/21 5:00 PM	26	Scott Davis	
28		4.3 - Design Walkthrough	2 days	10/12/21 8:00 AM	10/13/21 5:00 PM	27	Michelle Barns	
29		4.4 - Milestone: Design Sign Off	0 days	10/13/21 5:00 PM	10/13/21 5:00 PM	28		
30		5.0 - Construction	126 days	10/14/21 8:00 AM	4/7/22 5:00 PM			
31		5.1 - Web and Database Development	83 days	10/14/21 8:00 AM	2/7/22 5:00 PM			
32		5.1.1 Accounting module	30 days	10/14/21 8:00 AM	11/24/21 5:00 PM	28	Scott Davis	
33		5.1.2 Billing module	5 days	11/25/21 8:00 AM	12/1/21 5:00 PM	32	Michelle Barns	
34		5.1.3 Event module	12 days	12/2/21 8:00 AM	12/17/21 5:00 PM	33	Richard Smith	
35		5.1.4 Inventory module	15 days	12/20/21 8:00 AM	1/7/22 5:00 PM	34	Pam Stevens	
36		5.1.5 Admin module	7 days	1/10/22 8:00 AM	1/18/22 5:00 PM	35	Michelle Barns	
37		5.1.6 Reporting module	14 days	1/19/22 8:00 AM	2/7/22 5:00 PM	36	Pam Stevens	
38		5.1.7 - Milestone Web and Database Development Completed	0 days	2/7/22 5:00 PM	2/7/22 5:00 PM	37		
39		6.0 - Testing	43 days	2/8/22 8:00 AM	4/7/22 5:00 PM	38		

		Name	Duration	Start	Finish	Predecessors	Resource Names
40		5.1.1 - Create Test Plan	5 days	2/8/22 8:00 AM	2/14/22 5:00 PM	38	Scott Davis
41		5.1.2 - Create Test Cases	3 days	2/15/22 8:00 AM	2/17/22 5:00 PM	40	Michelle Barns
42		5.1.3 - Execute Test Cases	17 days	2/18/22 8:00 AM	3/14/22 5:00 PM	41	
43		5.1.3.1 Perform Testing	17 days	2/18/22 8:00 AM	3/14/22 5:00 PM		
44		6.3.1.1 Integration testing	2 days	2/18/22 8:00 AM	2/21/22 5:00 PM	41	Pam Stevens
45		6.3.1.2 Alpha Testing	5 days	2/22/22 8:00 AM	2/28/22 5:00 PM	44	Pam Stevens
46		6.3.1.3 Regression Testing	7 days	3/1/22 8:00 AM	3/9/22 5:00 PM	45	Pam Stevens
47		6.3.1.4 Beta testing	3 days	3/10/22 8:00 AM	3/14/22 5:00 PM	46	Pam Stevens
48		5.1.4 - Record Defects	5 days	3/15/22 8:00 AM	3/21/22 5:00 PM	47	Michelle Barns
49		5.1.5 - Fix Defects	3 days	3/22/22 8:00 AM	3/24/22 5:00 PM	48	Scott Davis
50		5.1.6 - Draft Test Report	2 days	3/25/22 8:00 AM	3/28/22 5:00 PM	49	Richard Smith
51		5.1.7 - Present Test Report for Approval	2 days	3/29/22 8:00 AM	3/30/22 5:00 PM	50	Michelle Barns
52		5.1.8 - User Acceptance Testing	4 days	3/31/22 8:00 AM	4/5/22 5:00 PM	51	Scott Davis
53		5.1.9 - UAT Approval	2 days	4/6/22 8:00 AM	4/7/22 5:00 PM	52	Jake Tower
54		5.2.0 - Milestone: Software Testing Phase Completed	0 days	4/7/22 5:00 PM	4/7/22 5:00 PM	53	
55		7.0 - Implementation and Integration	12 days	4/8/22 8:00 AM	4/25/22 5:00 PM	53	
56		7.1. - Release Integration	8 days	4/8/22 8:00 AM	4/19/22 5:00 PM		
57		7.1.1 - Production Deployment	2 days	4/8/22 8:00 AM	4/11/22 5:00 PM	53	Andrew Simonds
58		7.1.2 - Post Production Support Period (Hyper Care Period)	4 days	4/12/22 8:00 AM	4/15/22 5:00 PM	57	Richard Smith [30%]...
59		7.1.3 - Production Deployment Sign off	2 days	4/18/22 8:00 AM	4/19/22 5:00 PM	58	Jake Tower
60		7.1.4 - Milestone: Go Live Phase Completed	0 days	4/19/22 5:00 PM	4/19/22 5:00 PM	59	
61		7.2 - Release Implementation	4 days	4/20/22 8:00 AM	4/25/22 5:00 PM		
62		7.2.1- Training	2 days	4/20/22 8:00 AM	4/21/22 5:00 PM	60	Pam Stevens
63		7.2.2 - Documentation	2 days	4/20/22 8:00 AM	4/21/22 5:00 PM	60	Pam Stevens
64		7.2.3 - Hardware Installation	2 days	4/20/22 8:00 AM	4/21/22 5:00 PM	60	Pam Stevens
65		7.2.4 - Conversion Plan	2 days	4/22/22 8:00 AM	4/25/22 5:00 PM	64	Pam Stevens
66		7.2.5 - Milestone project handover	0 days	4/25/22 5:00 PM	4/25/22 5:00 PM	65	
67		8.0 Close Project	3 days	4/26/22 8:00 AM	4/28/22 5:00 PM	66	Andrew Simonds
68		9.0 - Final Reports	4 days	4/29/22 8:00 AM	5/4/22 5:00 PM	67	Jennifer Roberts
69		10.0 - Evaluate project success	7 days	5/5/22 8:00 AM	5/13/22 5:00 PM	68	Emily Webber

Risk Register

Risks Identified

	Risk	Reason	Risk Owner	Category	Overlapping with
1	Delay in training	Delay in training the store employees	Solution Vendor	Training Risk	
2	Delay from solution vendor	Delay in getting and launching the	Business Manager	Schedule Risk	Delay in Training
3	Insufficient Funding	Project Sponsor (Jake might not have	Business Manager & Store Owner	Budget Risk	
4	Misunderstanding of requirements/terms	Incorrect comprehension of	Champion Consultancy and Solution Vendor	Requirement Risk	
5	Change of requirement	Project Sponsor requesting customization	Champion Consulting and Solution Vendor	Requirement Risk	
6	Project Scope	Scope creep	Project Manager	Scope Risk	
7	Interfacing Issue	API/Interface	Solution Vendor and 3rd Party Vendor	Technical Risk	
8	Cloud Security	Mishandling of sensitive data causing	Solution Vendor	Technical Risk	
9	Data migration post solution implementati	Incorrect migration of data causing data	Business Manager and Solution Vendor	Technical Risk	
10	Intermittent Network Connectivity	Unavailability of cloud solution or	Solution Vendor and 3rd Party Internet Provider	Technical Risk	
11	End- User Acceptance	Project Sponsor (Jake might not be	Business Manager & Store Owner	Requirement Risk	
12	Unavailability of hardware/software resou	Resources are not bought or available	Business Manager & Store Owner	Resource Risk	
13	Key stakeholder resigns	Unavailability of cloud solution or	Business Manager, Solution Vendor and Champion Consulta	Resource Risk	

Risk Register

Date Identified	Deliverable	Risk Description	Category	Potential Impact Description	Risk Owner	Risk	Response	Response Comments	Loss Hours/Cost	Preventative Risk Hours/Cost	Preventive Strategic Plan	Contingency Strategic Plan	Date of Response Implemented
10/04/21	Training	Training from Solution Vendor to Elite Art Employees post project implementation	Training Risk	Improper usage of the system and lack of system understanding	Solution Vendor and Business Manager	5	Mitigate	Follow up with the solution vendor and the employees about the cloud solution training	3d/\$1500	\$0	Communicate the schedule in advance to avoid this risk	Project Schedule to be moved ahead until the employees are trained	N/A
10/04/21	Solution	Delay from solution	Schedule	Delay in getting and	Business	4	Mitigate	Follow up with the	1w/\$4000	\$0	Communicate	Move the	N/A
10/04/21	Project	Insufficient Funding	Budget	Project Sponsor (Jake	Business	4	Accept	Contact project	1w/\$5750	\$0	Communicate	Cloud solution	N/A
10/04/21	Requirement	Misunderstanding of	Requirement	Incorrect	Champion	3	Mitigate	Follow up with	1w/\$4400	1w/1400	Constant	Rectify the	N/A
10/04/21	Solution	Change of requirement	Requirement	Project Sponsor	Champion	3	Accept	Accept the end user's	1w/\$2000	1w/\$1200	Clearly	A contingency	N/A
10/04/21	Project	Project Scope	Scope	Scope creep	Project	5	Mitigate	Avoid scope creep	3d/\$5280	\$0	Clarifying the	Communicate	N/A
10/04/21	Connect to	Interfacing Issue	Technical	API/Interface	Solution	5	Transfer	Contact solution	1d/\$2460	1d/\$1000	Keep the	Project	N/A
10/04/21	Secured	Cloud Security	Technical	Mishandling of	Solution	5	Mitigate	Identify the security	1d/\$2000	1d/\$100	Have latest	To restore the	N/A
10/04/21	Successful data	Data migration post solution implementation	Technical Risk	Incorrect migration of data causing data loss	Business Manager	5	Mitigate	To identify and review the missing or bad	1w/\$5000	1w/\$1500	Have a robust solution and	Require additional	N/A
10/04/21	Continuous	Intermittent Network	Technical	Unavailability of cloud	Solution	2	Transfer	Identify and	1d/\$1400	\$0	Continuous	Follow up with	NA
10/04/21	Quality	End- User Acceptance	Requirement	Project Sponsor (Jake	Business	4	Accept	Follow up with Project	1w/\$2400	1w/\$3000	Communicate	Confirm the	NA
10/04/21	Seamless	Unavailability of	Resource	Resources are not	Business	2	Avoid	Track and	1d/\$2000	\$0	Agree upon	Project plan	NA
10/04/21	Availability of	Key stakeholder resigns	Resource	Major obstacles in	Business	2	Accept	Track the availability	1d/\$1000	\$0	Document	Use project	NA

Interview Questions

Functional

- **Account:** How does the current store membership account process work?
- **Inventory:** Can you provide us with the list of products, customers and suppliers? Do you want us to store special instructions for product storage?
- **Event:** When are the events scheduled and what is the average participation?

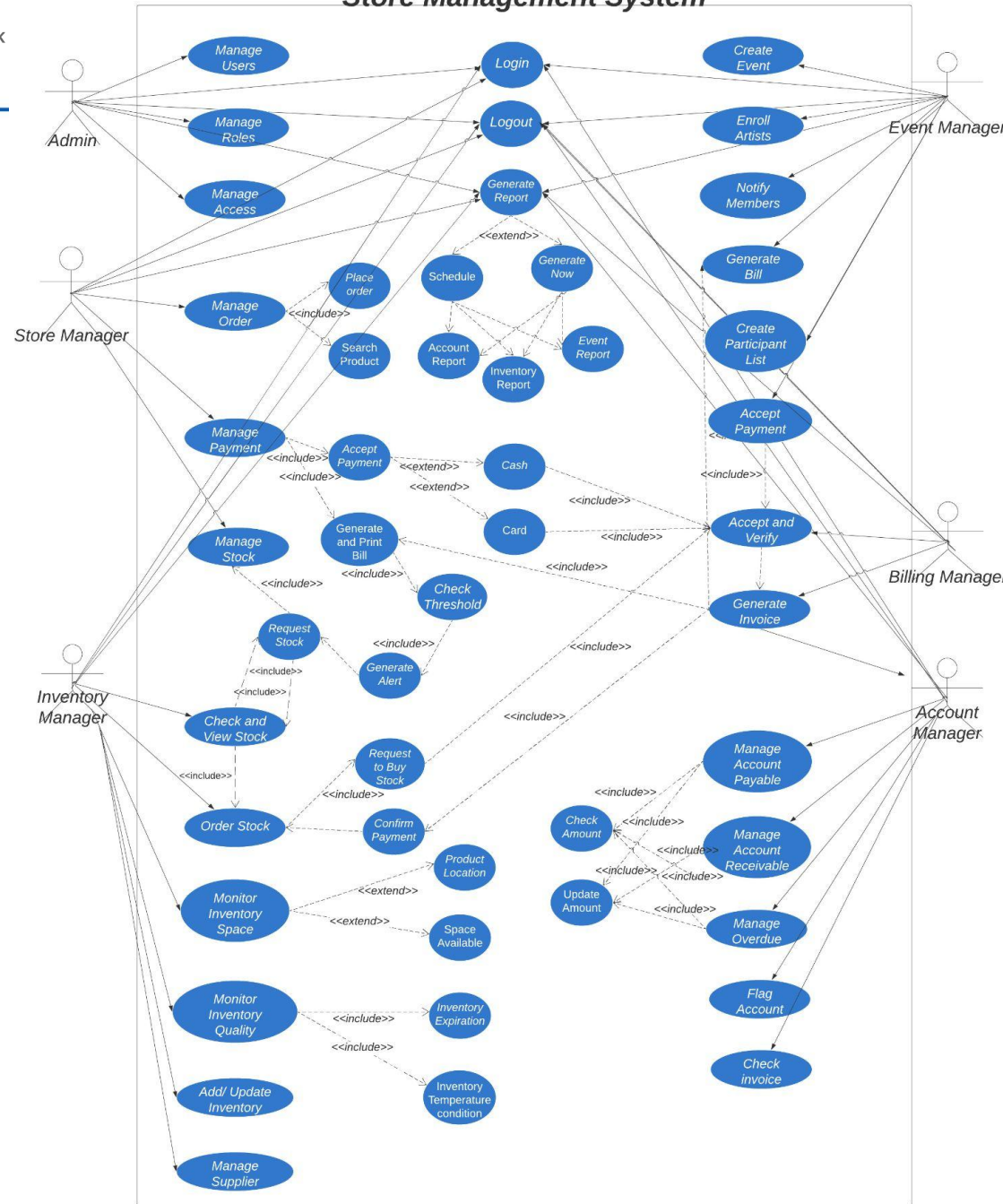
Non-Functional

- **Account:** Any other aspect of Account information you want to store in the system?
- **Billing:** What should be the format of Billing invoice/receipt?
- **Event:** What impact does organizing events cause on the organization budgets?
- **Other:** What goals does your organization want to achieve by implementing this project?
What are some of the KPI that you measure for your organization and how do you measure them at present?

System

- **Billing:** Who will use the Billing application and which all payment format do you want the system to process?
- **Other:** How is the cloud security addressed by your team?

Use Cases



Entity Relationship Diagram



User stories

- We are going to follow Agile methodology
- Why Agile?
 1. Customer satisfaction
- Product Backlog and Sprint Backlog
- First sprint- 4 weeks for planning,user story,use cases and test plan creation
- Rest sprints would be of 2 weeks including sprint review, testing
- Training end users
- Burnup and Burndown chart to track story points completion

- Factors considered while creating-
 1. Detail description of the need from user's perspective
 2. The conversations that happen during backlog grooming and iteration planning to solidify the details
 3. The tests that confirm the story's satisfactory completion
- We have created 15 user stories by identifying below users/actors :
Inventory manager,Store manager,Event manager,Billing manager,Account manager,All users,Admin

User Story

Number	Module	Impacted Areas	As a(n) (Role)	I need (What they are trying to do)	so that (Why they are trying to do it)	Acceptance Criteria (Definition of Done--> How do I know I have completed this?) Given [input preconditions], when [actions triggers], then [output consequences]
1	Inventory management	Inventory management, product	Inventory Manager	I want to view existing stock of products in the inventory	I am able to determine need of ordering new stock for products	User attempts login and accesses the inventory report.
2	Account	Account creation, maintenance	Account Manager	User wants to see remaining balance of a different customer	User can locate and notify customers to clear previous balance	User should be able to login to system and then entering customer id and name must find the previous remaining balance record.
3	Billing	Billing, payments	Billing Manager	I want to check payment status	I am able to determine if payments have gone through successfully or not	User attempts login and accesses the payment report.
4	Store Management System	Payment, invoice	Billing Manager	User wants to- Accept Payment, Generate Invoice, Print Bill	User can see Accept Payment, Generate Invoice, Print Bill	User should be able to login and perform all the mentioned tasks without fail
5	Event Management	Event, Artists, Account	Event Manager	I want to check how many participants have enrolled for an event	I am able to make event preparations accordingly.	User attempts login and accesses the event report.
6	Account	Customer account creation, account monitoring, Status update	Account Manager	I should be able to create, edit and delete customer accounts	Elite Arts have a list of all their customers	Ability to successfully create customer account. Ability to successfully edit and save the changes made to the customer account. Ability to delete the customer account.

Test plan

- Test plan has the test strategy, objectives, prerequisite, entry, exit, acceptance criteria, test data to perform testing
- To validate quality of the application
- Test cases designed based on user stories
- Positive as well as negative test scenarios have been considered
- Total number of test cases - 24

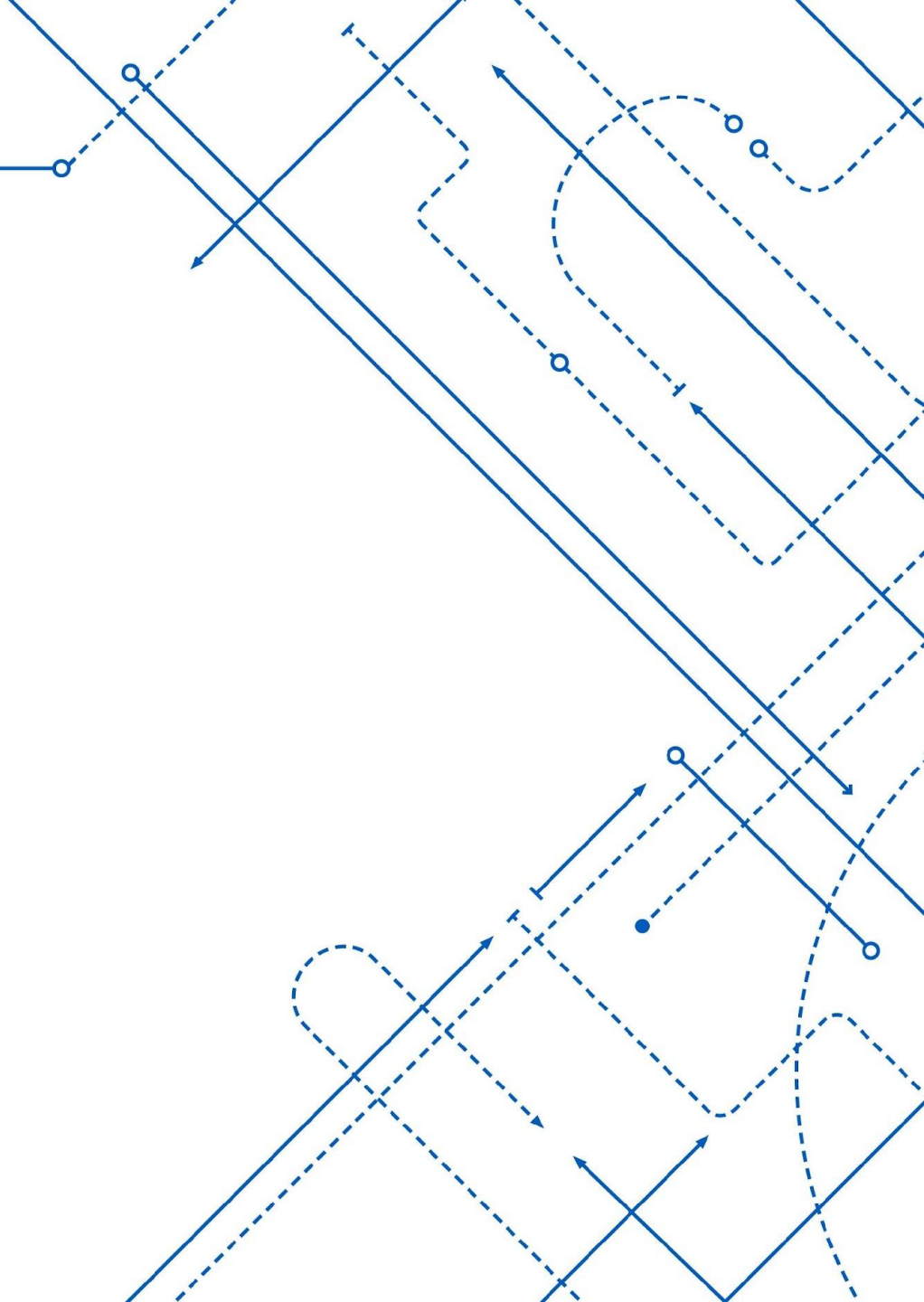
Test Plan										
User Story ID	Test Case ID	Test Scenario	Test Case	Pre-condition	Test Steps	Test Data	Expected Outcome	Post Condition	Actual Result	Status
US1	TC1	View existing products in the inventory	View existing products in the inventory	1. Inventory manager has access to the inventory 2. An inventory report has been generated by the Admin	1. login with valid Inventory manager credentials 2. access the inventory report	<Valid inventory manager credentials>	Inventory manager is able to login and access the inventory report for checking existing products.	All requested information is displayed	As expected	PASS
US2	TC2	Verify customer account(balance) related information	Check the customer's remaining balance	1. System user should be having account manager access to perform this task	1. Login using valid user id and password 2. Enter Customer id/name correctly	<Valid Customer id/name>	User should be able to pull out all the balance related report of a customer	Customer account related information displayed	As expected	PASS
US 3	TC3	Verification of payment status	Billing manager can check payment status	1. Billing manager has access to payment report 2. payment report has been generated by admin	1. Login with valid billing manager credentials 2. Access payment report to check payment status	<valid billing manager credentials>	billing manager is able login and check payment statuses for all transactions by accessing the payment report	All requested information is displayed	As expected	PASS
US4	TC4	Verify store related functionality	Checking product in the System, Place order, requesting alert based on available stock item	1. System user should be having stock manager access to perform this task	1. Login with store manager credentials	<Enter valid details based on requirement> Ex- for product availability->enter product id or name	Successfully getting all the required information	All requested information is displayed	As expected	PASS
US5	TC5	View participant enrollment through event report generation	Check participant enrollment for event	1.Event manager has access to event report 2. Event report has been generated by admin	1. Login with valid event manager credentials 2. Access the event report	<Valid event manager credentials>	event manager is able to login and check enrollment by accessing the event report.	All requested information is displayed	As expected	PASS
US6	TC6	Verify the customer account creation	Enter basic customer details like customer name, email, phone that meets the validation criteria of texts in the name and numbers for the phone	1. System user should be having Account manager access to perform this task	1. Enter customer details 2. Click Save	<Valid Customer Details>	Successfully created the customer account	Customer is shown in the Store Management System	As Expected	PASS

Next Step

- System Development
- System Testing
- System Implementation
- System Support

THANK YOU

Appendix



	Strategic Alignment	Cost Benefit Analysis	Time line	Value Proposition for Customers	Risk Potential	Weighted Average Score
Weight Assigned	32%	20%	17%	17%	14%	100%
Disha	8	7	5	7	5	31
Monika	9	7	5	8	3	27.5
Shruti	8	8	6	7.5	5	31
Kalyani	8	7	6	7	4	28
Store Management System (Mean Score)	8.25	7.25	5.5	7.375	4.25	6.87375

References:

1. Information Technology Project Management: Providing Measurable Organizational Value; by Jack T. Marchewka; ISBN-13: 978-1118911013; John Wiley, 5th edition.
2. <https://www.smartdraw.com/swot-analysis/swot-analysis-software.htm?id=380780&msclkid=e22574825f22127d753d15d2a060b02d>
3. <https://projectbliss.net/opportunity-statement/>