California State University Fullerton

CPSC 462

Object Oriented Software Design
Risk List & Risk Management Plan
for the

High Velocity Sales Technology System

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Revision History:

Version	Date	Summary of Changes	Author
1.0	September 28, 2020	• Initial Release	Ryan McDonald Alexander Frederick Benjamin Baesu
1.1	November 9, 2020	• Identified new risk and added mitigation plan to document	Ryan McDonald Alexander Frederick Benjamin Baesu
1.2	December 2, 2020	• Renumbering of mitigation approach item.	Ryan McDonald Alexander Frederick Benjamin Baesu

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1 Risk Identification and Mitigation Plan

No.	Title	Description	Weight	Category	Mitigation Approach	Metric used to Measure
1.	Payment Authorization Service Unavailable	**If** the payment authorization service is no longer available **then** no transactions would be able to be completed **resulting in** $21,600 per day in lost revenue.	High	Business	1.Have alternative payment authorization service in place in case of downtime. 2.Implement in-house alternative payment authorization. 3.Monitor failure rates and switch to different payment authorization service provider within 1 hour of failure.	Frequency of Failures: 1.Number of failures per hour must be <50 2.Number of failures per day must be < 200 3. Number of failures per month must be <1000
2.	Total System Failure	**If** there is a total system failure **then** no transactions can be completed **resulting in** $21,600 per day in lost revenue.	High	Technical	1. Run system on multiple servers and not one centralized server. 2.Maintain backup servers to host system on in event of a server failure. 3. Monitor server downtime and switch servers within 2 hours.	Server Downtime: 1.Server must be operational for more than 55 minutes per hour 2.Server must be operational more than 23 hours per day
3.	Developer Leaves Project	**If** one of the project developers leaves the project, **then** system launch would be delayed **resulting in** $21,600 in lost revenue for each day the launch is delayed.	Normal	Schedule	1.Train additional developers to work on project as an as needed basis. 2.Introduce independent contractor with project-based agreement.	Developers working on project: 1.The number of developers must not fall more than 1 below the number of starting developers.

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4.	Project runs behind schedule	**If** the project is running behind schedule **then** the launch will be delayed and the costs for production would increase **resulting in** an additional project cost of $20,000 per week and $21,6000 per day in lost revenue.	High	Schedule	1.Establish reasonable and manageable goals to be met by different timeframes. 2.Biweekly meetings to check in on project progress. 3.Montior progress and introduce additional developer to speed up development if it falls below threshold.	Project behind schedule: Developers need to reach more than 95% of system goals per biweekly meeting.
5.	Loss of Customer Data	**If** there is a loss of the customer data **then** customers would need to recreate an account, slowing the time for a single transaction by 30 seconds thus and decreasing the total number of transactions per day by 50 **resulting in** $750 per day in lost revenue.	Low	Resource	1. Host customer information on multiple servers so in event of one server failure we can swap to another without losing data. 2. Maintain backup servers storing customer information. 3. Monitor server downtime and switch servers within 4 hours.	Server Downtime: 1.Server must be operational for more than 45 minutes per hour 2.Server must be operational more than 20 hours per day
6.	Loss of Inventory Data	**If** there is a loss of the inventory data **then** no purchases would be able to be made as there would be no inventory to select from **resulting in** $21,600 per day in lost revenue.	High	Resource	1. Host inventory data on multiple servers. 2. Back up inventory data every 30 minutes to mitigate risk of data loss. 3. Monitor server downtime and switch servers within 2 hours.	Server Downtime: 1.Server must be operational for more than 55 minutes per hour 2.Server must be operational more than 23 hours per day
7.	System Latency Disruption	**If** the system does not respond within an adequate time to requests **then** the time it takes for an individual purchase to be made would be increased by at least 20 seconds **resulting in** at least $500 in lost revenue per day.	Low	Technical	1.Test system response time as project is in development phase. 2. If system response time does not fit requirements,	System Response Time: 1.System must respond to

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					changes need to be made in system design to reduce response times.	requests within 2 second.
8.	Inventory Does Not Update Correctly	**If** inventory does not update correctly **then** customers may be able to purchase products that are out of stock and payments would have be refunded and re-ordered without out of stock items **resulting in** $1,000 per day in lost revenue.	Normal	Resource	Quality assurance testing must be done before product launch.	Inventory Update Success after Purchase: 1. Inventory data must updated for more than 99.9% of all purchases.