**Risk Identification Checklist**

***1 - Product Size Risks***

* Estimated Size in Lines of Code(LOC)

“Elite Shoppy” will have 10,000 lines of code(LOC).

* Degree of Confidence in the estimated size

We are highly confident of our estimated size.

* Estimated size in number of programs, files, and transactions

Programs - N/A

We estimate 20 large files for the user- interface.

We estimate 5 or more transactions for the engine.

* Percentage deviation in size from average for previous products

N/A.

* Size of the database created or used

The size of the database that we will use will be an estimated 11 tables. The number of fields will vary per table and will have an overall average of 5 fields per table. The number of records in each table will vary with the number of sprites that the user adds to the project, and the number of instances of each sprite that the user creates.

* Number of Users

The number of users will be fairly high. There will be 100 user per instance of the software running, *as the software is intended for multi-user use.*

* Number of Projected changes to the requirements

We estimate multiple projected changes to the requirements. These will be as a result of our realization of what is required and not required as we get further into implementation, as well as verification of the customer’s requirements.

* Amount of reuse of software

N/A.

***2 - Business Impact Risk***

* Effect on company revenue

The e-commerce website will cause a significantly increase the company revenue. The staff will be compensated based on their performance, effort and contribution.

* Visibility of product to senior management

N/A.

* Reasonableness of delivery deadline

The project deadline is highly reasonable and the entire project is completely doable in the given time period.

* Number of customers and the consistency of their needs

The number of customers will be high. They include the buyers and sellers. The project is an online buying and selling platform. The needs of the customers including the buyer and seller are well considered during the planning of the project.

* Number of other systems/products that product must be interoperable with?

Not applicable as the resultant project is a website.

* Sophistication of end users

Moderate. The UI is easy to use and simple in design; anybody knowing how to browse the web can follow the instructions and use the website.

* Amount and quality of documentation that must be produced and delivered to customer

N/A

* Governmental constraints in the construction of the product

As the website is based on e-commerce, it is vulnerable to the changes in the government policies and rules.

* Costs associated with late delivery

N/A

* Costs associated with a defective product

If the resultant website has many visible bugs and defects, then it may become very difficult for the users to operate. It can also cause the servers to crash and make the website halt for frequent maintenance.

***3 - Customer Related Risks***

* Have you worked with the customer in the past?

No, we have not worked with customer in the past.

* Does the customer have a solid idea of what is required?

Yes, the customer has access to both the System Requirements Specification, and the Software Requirements Specification for the website.

* Will the customer agree to spend time in formal requirements gathering meetings to identify project scope?

Unknown. While the customer will likely participate if asked, the inquiry has not yet been made.

* Is the customer willing to establish rapid communication links with the developer?

Yes, the customer is available through call, as well as in person, to all project developers.

* Is the customer willing to participate in reviews?

Unknown. While the customer will likely participate if asked, the inquiry has not yet been made.

* Is the customer technically sophisticated in the product area?

No, the customer doesn’t have much technical expertise and depends on the developers to explain the technical aspect of the project to him.

* Is the customer willing to let your people do their job?

Yes. The customer does not interfere with development operations.

* Does the customer understand the software process?

No. The customer does not have insight into the technical aspect of the project.

***4 - Process Risk***

* Does senior management support a written policy statement that emphasizes the importance of a standard process for software development?

N/A. PA Software does not have a senior management. It should be noted that the structured method has been adopted for the GameForge project. At the completion of the project, it will be determined if the software method is acceptable as a standard process, or if changes need to be implemented.

* Has your organization developed a written description of the software process to be used on this project?

Yes. Elite Shoppy is under development using the structured method as described in part three of Roger S. Pressman Software Engineering, A Practitioner’s Approach.

* Are staff members willing to use the software process?

Yes. The software process was agreed upon before development work began.

* Is the software process used for other products?

N/A. Our team has no other projects currently.

* Has your organization developed or acquired a series of software engineering training courses for managers and technical staff?

Yes. The development team has undergone training related to software engineering.

* Have documented outlines and examples been developed for all deliverables defined as part of the software process?

Yes. The course instructor has supplied outlines for all deliverables.

* Are formal technical reviews of the requirements specification design and code conducted regularly?

No. Although informal reviews are conducted by the developers.

* Are formal technical reviews of test procedures and test cases conducted regularly?

No. Although informal reviews are conducted.

* Are the results of each formal technical review documented, including errors found and resources used?

N/A. As formal technical reviews have not been conducted, they cannot be documented.

* Is there some mechanism for ensuring that work conducted on a project conforms with software engineering standards?

No. There has been no planned method to ensure software-engineering standards will be met.

* Is configuration management used to maintain consistency among system/software requirements, design, code and test cases?

No. The consistency of documents is not regulated.

* Is a mechanism used for controlling changes to customer requirements that impact software?

No. The customer requirements for the Elite Shoppy project are fairly flexible. The customer has allowed a great deal of freedom to the project developers.

* Is there a documented statement of work, a software requirements specification, and a software development plan for each subcontract?

N/A. All work is done by a single development team. No subcontracting will take place on the Elite Shoppy project.

* Is there a procedure followed for tracking and reviewing the performance of subcontractors?

N/A. All work is done by a single development team. No subcontracting will take place on the Elite Shoppy project.

***5 - Technical Issues***

* Are facilitated application specification techniques used to aid in communication between the customer and the developer?

Development team and stakeholders meet regularly to discuss progress and the reviews on the progress made. Specifications that need to be altered are noted down.

* Are specific methods used for software analysis?

Standardized SQA and SCM techniques are used to measure the quality of the software being produced and the progress being made as well.

* Do you use a specific method for data and architectural design?

All design specifications are object oriented to the maximum extent possible.

* Is more than 90 percent of your code written in a high-order language?

Yes. Code will be written in a combination of HTML, CSS, PHP, JavaScript, JQuery and SQL.

* Are specific conventions for code documentation defined and used?

No. Specific conventions have not been established, but all design members have agreed to comment code as completely as possible.

* Do you use specific methods for test case design?

Yes. A number of test cases are used to validate the integrity of use input fields and simulate for any unexpected behaviour.

* Are software tools used to support planning and tracking activities?

No. No software tools are to be used.

* Are configuration management software tools used to control and track change activity throughout the software process?

Version control software Git is being used to keep track of the latest versions of the code.

* Are software tools used to support the software analysis and design process?

Yes, software tools at creately.com have been used to design activity diagrams, data flow diagrams, ER diagrams for the system.

* Are tools used to create software prototypes?

No. Prototypes are not created at any stage of development.

* Are software tools used to support the testing process?

No. Manual testing is performed.

* Are software tools used to support the production and managing of documentation?

Yes. Microsoft Word will be used to support the production and management of all technical documentation.

* Are quality metrics collected for all software projects?

No. No plans have been made to collect quality metrics at this time.

* Are productivity metrics collected for all software projects?

No. No plans have been made to collect productivity metrics at this time.

##### ***6 - Technology Risks***

* Is the technology to be built new to your organization?

Yes, EliteShoppy is a C2C e-commerce website, which will be the first ever e-commerce product developed by us.

* Do the customer’s requirements demand the creation of new algorithms or input or output technology?

No. EliteShoppy will be implemented using existing algorithms. Input and output are handled in a traditional manner.

* Does the software interface with new or unproven hardware?

No. EliteShoppy runs within browsers of computers/mobiles/tablets with standard and traditional hardware.

* Does the software to be built interface with vendor supplied software products that are unproven?

Not applicable.

* Does the software to be built interface with a database system whose function and performance have not been proven in this application area?

No. EliteShoppy utilizes the phpMyAdmin database and INNODB database engine. The database system is stable and used widely.

* Is a specialized user interface demanded by the product requirements?

Yes. The interface is completely specialized. The GUI is completely our design and no other application out (to our knowledge) contains exactly what is expected of our software.

* Do requirements for the product demand the creation of program components that are unlike any previously developed by your organization?

Yes. The entire product is composed of various subsystems and components that we have not developed yet.

* Do requirements demand the use of new analysis, design, or testing methods?

No. The development team will implement existing analysis, design, and testing methods for the project.

* Do requirements demand the use of unconventional software development methods?

No. EliteShoppy uses conventional development methods, used widely in the web development industry.

* Do requirements put excessive performance constraints on the product?

Yes. There is a performance constraint, although not “excessive”, for the system to perform flawlessly and improve user experience.

* Is the customer uncertain that the functionality required is “doable”?

No. The customer has full confidence in the project as described in the System Requirements Specification Document.

***7 - Development Environment Risk***

* Is a software project management tool available?

No software tools are to be used.

* Are tools for analysis and design available?

No software tools are to be used.

* Do analysis and design tools deliver methods that are appropriate for the product to be built?

N/A. No analysis or design tools are to be used.

* Are compilers or code generators available and appropriate for the product to be built?

N/A

* Are testing tools available and appropriate for the product to be built?

No. No software tools are to be used.

* Are software configuration management tools available?

No. No software tools are to be used.

* Does the environment make use of database or a repository?

Yes. All the necessary files are stored in a MySQL database.

* Are software tools integrated with one another?

N/A. No software tools are to be used therefore they cannot be Integrated.

* Have members of the project team received training in each of the tools?

N/A. No software tools are to be used. Due to the existing deadline, the development team felt it would be more productive to begin implementing the project than trying to learn new software tools. After the completion of the project software tools may be implemented for future projects.

* Are local experts available to answer questions about the tools?

N/A. Local experts will not be necessary.

* Is on-line help and documentation for the tools adequate?

N/A. Online help will not be necessary.

***8 - Staff Size and Experience Risks***

* Are the best people available?

Yes. The software team has moderately qualified software engineers to implement the e-commerce project.

* Do the people have the right combination of skills?

Yes. The team members have experience in web development and database management technologies.

* Are enough people available?

Yes. The team is of four people and the work is divided amongst the team members.

* Are staff committed for entire duration of the project?

Yes. Everyone will be committed during the entire duration.

* Will some project staff be working only part time on this project?

No. All team members will be fully committed to the project.

* Does staff have the right expectations about the job at hand?

Not Applicable.

* Has staff received necessary training?

Not Applicable.

* Will turnover among staff be low enough to allow continuity?

Not Applicable.

**Risk Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Risks** | **Category** | **Probability** | **Impact** |
| Size of database | PS | 80% | 2 |
| Number of users | PS | 80% | 3 |
| Government constraints | BU | 80% | 4 |
| Number of customers who will use this product | BU | 30% | 2 |
| Customer is not technically sophisticated | CU | 50% | 2 |
| No formal technical reviews conducted | PD | 30% | 3 |
| Specialized user interface required | TE | 60% | 1 |
| Significant performance constraints | TE | 50% | 2 |
| Staff might not have right skills | ST | 30% | 2 |
| Commitment of staff for entire duration | ST | 75% | 3 |

**Impact Values:**

**1 – Catastrophic**

**2 – Critical**

**3 – Marginal**

**4 – Negligible**

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| --- | --- | --- | --- |
| **Risk Information Sheet** | | | |
| **RISK ID: 8** | **Date: 15/03/2018** | **Prob: 50%** | **Impact: Critical** |
| **Description:**  Performace mishaps and technical difficulties are detrimental to an ecommerce wesbite because anything less than an efficient, convenient and beautiful digital experience will result in a loss of conversion. | | | |
| **Refinement/Context:**  Sub condition 1 – Steadily increasing amounts of traffic or sudden bursts of traffic during sales or the holiday rush.  Sub condition 2 – Website relies heavily on great looking product pictures to generate sales. Longer page load time will affect the customer experience, conversion rates and ultimately the sales revenue.  Sub condition 3 – Important workflows through the website are not monitored leading to a displeasing user journey. Website is not optimized for mobile users. | | | |
| **Mitigation/monitoring:**  - Utilizing a Content Delivery Network that includes a properly installed and configure caching solution will improve the website scalabilty  - Optimization of images, use of Content Delivery Network, minification of the code to be done in order to reduce the page load time  - Define proper sequences of URLs to be followed, monitor broken links regularly. Development should be done keeping in mind mobile first approach. | | | |
| **Management/contingency/trigger:**  - Vital website statistics should be periodically monitored to fetch average load times over a stipulated period of time. An increase in load time over 3 seconds should be investigated and fixed.  - Workflow documentation is crucial for a rich user navigation experience. Any identified broken links or non-optimized mobile pages should be immediately fixed. | | | |
| **Current Status:**  18/01/2018: Mitigation steps initiated | | | |
| **Originator:** Jahanvi Jasani | | **Assigned:** Arnav Jalui | |

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| **Risk Information Sheet** | | | |
| **RISK ID: 7** | **Date: 10/01/2018** | **Prob: 60%** | **Impact: Catastrophic** |
| **Description:**  Certain movies and shows contain scenes that require the viewing audience to be of a certain age(18 years). Such content is rated ‘R’ and the availability of such content could attract attention from the Government. Also, there will have to be provisions to ensure that only users above the age limit have access to such content. | | | |
| **Refinement/Context:**  Sub condition 1 - Censor Board opposing the content.  Sub condition 2 - The government might push for regulation of ‘R’ rated content | | | |
| **Mitigation/monitoring:**   * All content available on the system will be approved by the Censor Board first to avoid affecting any sect or portion of the Indian community. * Registration with Aadhar Card for age verification to ensure that users get age appropriate content. | | | |
| **Management/contingency/trigger:**   * RE computed to ₹500,000 * All series and movies will be produced within the limit approved by the censor board. * Trigger: Mitigation steps unproductive as of 24/02/18 | | | |
| **Current Status:**  15/02/18 Mitigation steps initiated | | | |
| **Originator:** | | **Assigned:** | |