





SEBA – Web Application Engineering

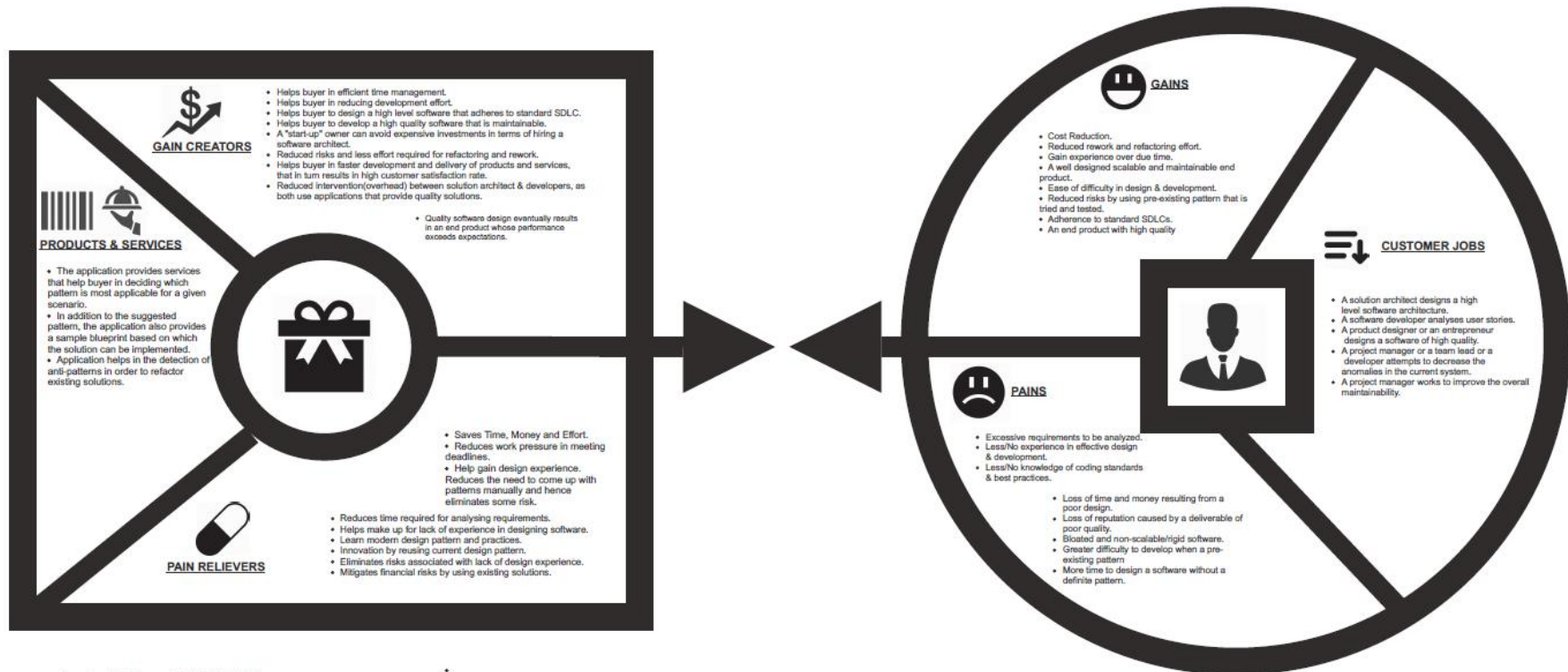
Exercise 1

Nostradamus – A Design Pattern Analyzer

Team Composition

			
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<p>Field of Study : Informatics</p>	<p>Field of Study : Informatics</p>	<p>Field of Study : Informatics</p>	<p>Field of Study : Informatics</p>

Value Proposition Canvas



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Solution Architect

- Design software architecture

Developer

- Implement the requirements by adhering to standards related to software quality

Entrepreneur / Inexperienced Designer

- Choose the best possible design approach for the given idea

Project Manager / Team Leads / Developers

- Detect anti-patterns in existing solution

Pains and Gains

Pains

- ☐ Badly designed software leads to loss of reputation/trust/integrity/dependability
- ☐ Large investments in terms of time and money for development in the absence of a pre-existing pattern
- ☐ Presence of anti-patterns may require avoidable rework and refactoring

Gains

- ☐ A good software which ensures good design, quality and performance
- ☐ More efficient use of time, effort and money
- ☐ Early detection of anti-patterns
- ☐ Implementation based on tried and tested methods

Products and Services

The application provides the following products and services :

- ☐ Application supports the user in deciding which pattern is most applicable for the current scenario
- ☐ In addition to the suggested pattern ,the application also provides a sample blueprint based on which the solution can be implemented
- ☐ Application helps in the detection of anti-patterns which helps to refactor existing solutions

Gain Creators and Pain Relievers

Gain Creators

- ☐ Enables efficient time management and reduces overall development effort
- ☐ Helps to design a high quality software that adhere to standard SDLC
- ☐ Helps achieve greater maintainability by reducing risks involved during design refactoring
- ☐ Reduced overhead between solution architect and developers

Pain Relievers

- ☐ Produces savings in the form of time, money, effort
- ☐ Reduces work pressure, helps gain design experience
- ☐ Reduces the need to come up with patterns manually and hence eliminates some risk
- ☐ Helps customers learn modern design pattern and practices in addition to innovation

Use Case (1)

Brief Description	Application can be used as a support tool in order to design high level architecture
Actors	Solution Architects
Preconditions	Requirement Document from the Requirement Elicitation phase
Basic Flow of Events	The user answers a set of questions. The answers are internally mapped against a set of business rules in order to suggest the best possible design pattern
Post Conditions	The output will be the best possible design pattern for the given use case. Additionally, a sample diagram of the particular pattern will also be shown which will serve as a point of reference

Use Case (2)

Brief Description	Application can be used as a support tool so that the right design pattern is used during development process
Actors	Developers
Preconditions	User Story or a task which has been assigned to the developer
Basic Flow of Events	The user answers a set of questions based on the user story/task which has been assigned
Post Conditions	The output will be the best possible design pattern for the given use case. Additionally, a sample diagram of the particular pattern will also be shown which will serve as a point of reference for the development

Use Case (3)

Brief Description	Application can be used as a support tool to ensure a stable design
Actors	Entrepreneurs with relatively less or zero experience
Preconditions	Requirement Document from the Requirement Elicitation phase. In case of absence of a Requirement Document, a concrete idea which can act as a substitute for the document
Basic Flow of Events	The user answers a set of questions based on which Requirement Document or the idea
Post Conditions	The output will be the best possible design pattern for the given use case. Additionally, a sample diagram of the particular pattern will also be shown which will serve as a point of reference for the development

Use Case (4)

Brief Description	Application can be used as a support tool to detect anti-patterns in existing solutions
Actors	Project Manager / Team Leads / Developers
Preconditions	Anomalies in the behavior of an existing system. Also, difficulties in development or maintenance which could also indicate presence of anti-patterns
Basic Flow of Events	The user answers a set of questions related to the anomalies/difficulties being experienced
Post Conditions	The output indicates possible anti-pattern being present. Additionally, corrective measures will be suggested

Thank You.