

**Project Research Log**

Charity Second-hand Online Store

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| Name: | Cong Shang |
| Date: | 3th March 2020 |
| Resources: | <https://www.synopsys.com/blogs/software-security/top-4-software-development-methodologies/> |
| Topic: | Methodology |
| Comments | |
| Compare the advantages and disadvantages of methodologies:This article describes the advantages and disadvantages of Waterfall, rapid application, agile development and describes the characteristics and reasons of choice. | |

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| Researcher: | Cong Shang |
| Date: | 18th March 2020 |
| Resources: | <https://www.keycdn.com/blog/popular-databases> |
| Topic: | Comparison of databases |
| Comments | |
| Very useful document. I will quote it into proposal document.  List pros and cons of 8 popular databases which includes Oracle 12, MySQL, Microsoft SQL Server, DB2 etc.  This article also provides the background introduction of each database products. | |

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| Name: | Cong Shang |
| Date: | 18th March 2020 |
| Resources: | <https://www.guru99.com/software-engineering-prototyping-model.html>  <https://www.lumitex.com/blog/prototyping-methodology> |
| Topic: | Research Prototyping Methodology |
| Comments | |
| Introduce what is Prototyping Model.  The phases of using prototyping.  Introduce the characteristics of four types of Prototyping:   1. Rapid Throwaway prototypes (we plan to use) 2. Evolutionary prototype 3. Incremental prototype 4. Extreme prototype   It also descripts the advantages and disadvantages of prototyping methodology. | |

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| Researcher: | Cong Shang |
| Date: | 24th March 2020 |
| Resources: | <https://en.wikipedia.org/wiki/Flowchart>  <https://en.wikipedia.org/wiki/Unified_Modeling_Language>  <https://support.microsoft.com/en-gb/office/uml-diagrams-in-visio-ca4e3ae9-d413-4c94-8a7a-38dac30cbed6#OfficeVersion=Web>  <https://www.objectaid.com/class-diagram> |
| Topic: | How to draw the diagram |
| Comments | |
| Description of the classification of diagrams in the unified modelling language.  The diagrams required for this project will be flow diagrams and use case diagrams  Entity relationship diagrams can be automatically completed by MYSQL client tools. The premise is to complete the data design and set up the data table structure in the database.  We plan use eclipse plugin for generating the class diagram, | |

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| Researcher: | Cong Shang |
| Date: | 1st April 2020 |
| Resources: | <https://www.javatpoint.com/servlet-tutorial> |
| Topic: | What is web application and servlet? |
| Comments | |
| 1. The definition of web application: A web application is an application accessible from the web. A web application is composed of web components like Servlet, JSP, Filter, etc. and other elements such as HTML, CSS, and JavaScript. The web components typically execute in Web Server and respond to the HTTP request. 2. Compare with the CGI (Common Gateway Interface), what are advantages of servlet.   a) Better performance: because it creates a thread for each request, not process.  b) Portability: because it uses Java language.  c) Robust: JVM manages Servlets, so we don't need to worry about the memory leak, garbage collection, etc.  d) Secure: because it uses java language. | |

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| Researcher: | Cong Shang |
| Date: | 10th April 2020 |
| Resources: | <http://www.cssmoban.com/tags.asp?n=bootstrap>  <http://www.cssmoban.com/cssthemes/9300.shtml> |
| Topic: | Front-end template. |
| Comments | |
| Beautiful free Front-end template.  We download five templates for our customers to pick.  We recommended templates include, cpts\_467\_tq, cob\_1\_kiaalap.  cpts\_467\_tq is used to show the front-stage (shop website).  cob\_1\_kiaalap is for back-stage management (management website). | |

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| Researcher: | Cong Shang |
| Date: | 28th April 2020 |
| Resources: | <https://www.jianshu.com/p/b9b98ac3e010>  <https://www.baeldung.com/java-connection-pooling>  <https://devcenter.heroku.com/articles/database-connection-pooling-with-java> |
| Topic: | Select the database connection pool |
| Comments | |
| 1. Compare the characteristics of popular connection pools. 2. introduce why the project should use connection pool. 3. Introduce he implementation of connection pool. 4. Introduction and configuration of DBCP.   We decide to use DBCP as the connection pool in this project. The reason is that the configuration is simple and easy to use. | |

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| Researcher: | Cong Shang |
| Date: | 18th May 2020 |
| Resources: | <https://docs.oracle.com/javase/8/docs/api/java/sql/Timestamp.html>  <https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input/datetime-local>  <https://www.layui.com/laydate/?alone> |
| Topic: | How to use HTML5 Datetime-Local input type |
| Comments | |
| We found out the Internet explorer does not support HTML5 Datetime-Local label.  In the Internet explorer and safari browsers, the Datetime-Local input type is not working, the user could not input the date and could not see the countdown results in the web page.  Final we decided to use a free product named “LayDate”. It can support for main of popular browsers and easy to config. | |