



ToyToyerz

Final Documentation

Group 1:

Tejas Dwarkaram – H00182776
Nelio Lucas – H00182777
Ndumiso Mkhatshwa – H00182874
Khethiwe Ngwenya – H00182866
Sabelo Mabuza – Pending

3rd Year Group Project CS @ HW From Aug 2014

Checklist for CTI Student Group – Final submission

GENERAL INFORMATION	
Date:	20 October 2014
Name of CTI Campus (e.g., Durban)	Nelspruit
Number and/or Name of Group	Group 1 – CAX
Names of students in the group	
Tejas Dwarkaram – H00182776 Nelio Lucas – H00182777 Ndumiso Mkhatshwa – H00182874(Status Unknown) Khethiwe Ngwenya – H00182866 Sabelo Mabuza – Pending (Status Unknown)	
Project Topic (e.g. Airline)	Toy Manufacturer
URL of ScreenR demos	Introduction - https://www.screenr.com/F6IN Admin Functions - https://www.screenr.com/z6IN Staff Functions - https://www.screenr.com/Y6IN Security Functions - https://www.screenr.com/b6IN Client Functions - https://www.screenr.com/v6IN
URL of websites (if any). Any usernames and passwords required to enable a marker to use the website as a guest	Administrative Login: username: tejas@uk.com password: hello Employee Login: username: c@uk.com password: hi url: localhost:8080/toytoyerz_final/login.jsp

STUDENT SUBMISSION CHECKLIST	<i>Tick if present</i>
PAPER DOCUMENTATION : TWO copies, each containing:	
This submission sheet	✓
Project Diary	✓
Requirements Specification	✓
Project Plan - original	✓
Project Costing	✓
Risk Analysis	✓
CVs	✓
Design Report	✓
Implementation Report	✓
Product Evaluation incl initial GUIs	✓
User Guide	✓
Operations and Maintenance Guide	✓
Project Evaluation	✓
CDs : TWO copies, labelled with campus and group number containing application code, other fine detail such as test results or version control log.	✓



ToyToyerz

Project Diary

Group 1:

Tejas Dwarkaram – H00182776
Nelio Lucas – H00182777
Ndumiso Mkhatshwa – H00182874
Khethiwe Ngwenya – H00182866
Sabelo Mabuza – Pending



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Project Diary

The following entries form part of the Project Diary for the development process of the Inventory Management System for the ToyToyerz Supply Chain. It is intended as an aid that can be used when considering the retrospective of our project. Find attached additional documents that were created by the scribe of the team, as well as some notes that were taken by myself (Project Leader)

Project diary: Toy Manufacturing Inventory Management System

Project leader: Tejas Dwarkaram

Supervisor: Mr Tom Zimba

Client: Mr Eras Botha (EB)

11/02/2014: Discussed Preliminary programming language that will be used (Java), discussed draft CV's that were created

To Do: Reconstruct CV's based on the how the client has advised us to do so. Also make sure that I am certain of whether or not the Glassfish Server will work better than Apache!

14/02/2014: EB liked the new CV layouts (Awesome!). He also wants us to research competitor systems, so that we are able to create a system that is on par with the current market out there.

To Do: Research the how current Inventory Management Systems operate. Make sure that everyone in my group does a draft of the Requirements Document, in terms of Functional and Non-Functional requirements. Also, make sure I unify all of the members CV's.

21/02/2014: We reviewed the CV's once more, just minor detail to cover. We also did research on Inventory Management System websites, and decided on the colour scheme that EB wants us to incorporate for him.

To Do: EB wants us to provide a cost analysis along with a risk analysis document the next time we see him. (Note, that I want to research Burn down Charts, and maybe even Break Even Charts to seem fancy when I show him the costing haha!!)



07/03/2014: EB wants us to have unified documentation as well, in terms of: font, colour, text size and layout. He wants to see that he has ACL (Access Control Lists) implemented, to make sure Staff don't have access to Managerial functions.

To Do: Research Harvard Referencing for all my documentation! Also check for ways in which I can incorporate ACL Lists (I'm thinking of maybe using clearance levels when we add the user to the database, could work). Also try and look at what Assumptions and Dependencies are all about for my Risk Management Plan.

14/03/2014: We've decided on roles, although I do not thoroughly trust that this is going to work out. EB wants us to start jotting down the key functionality that needs to be part of the system and also to tell him when the soonest is that he will receive a prototype.

To Do: Explain to my group members what and how a Data Flow Diagram is (gosh.) Also make sure I go and look up what I can use for Unit Testing. Make sure I get everyone to present at least one Initial GUI design for the system.

25/03/2014: So the GUI designs that were brought forward, were well (no comment). Also EB liked the concept that Mr Nelio Lucas was bringing to the table.

To Do: Make sure my team is doing their work, I've already sent them a collection of interfaces for which I want them to design diagrams for. Also redefine the concept that was brought forward by Nelio.

28/03/2014: We discussed a possible initial (actual) design for the system, which failed badly because I didn't add the correct padding to the html page!

To Do: Draw up the implementation document to keep EB up-to-date on what's going on with his system. Also check up on why members of my team are doing nothing productive.

11/04/2014: Members are not producing their work (No surprise there). EB seems happy with how the structure.

To Do: Make sure I create the UML diagrams for the functionality of the system! Also create a deployment diagram to show EB how the system is going to operate. He also wants to see a table containing the list of possible errors that might occur whilst using the system, along with a description and how we are going to handle the error. Research what KANBAN is!



25/04/2014: EB doesn't like how our risks are presented. He also wanted to know how we were going to implement the reporting functionality for him (I really don't know!! It's so difficult in Java).

To Do: Told everyone in the team to do the HTML and JavaScripting courses that are found on www.codeacademy.com, seeing as none of them have any exposure to those fields!

10/06/2014: Holidays are going on right now, and I have not heard from anyone in my team, regarding their progress on the codeacademy tutorials. Nelio has come back to me, and has completed HTML

29/06/2014: Still nothing from my team. I guess I am just going to depend on Nelio to do some of the work, and I will be completing the rest.

11/07/2014: EB wanted to see the Critical Path on the Gantt Chart we presented to him at the beginning of the year. Also he wants us to ensure user-friendliness in the system.

To Do: Members still not working, becoming an issue now. Also EB hinted that we could us a book called "Information System Engineering", Make sure I go look for that!!

08/08/2014: EB was updated with the current functionality completion of his system (which was not as much as we expected, as it is just myself working on the system).

To Do: Continue researching how to do the reporting functionality. I found one that might work "iReport" but it seems highly complicated, and I won't be able to produce statistical information in the form of graphs.

16/10/2014: Took the system for Acceptance Testing to EB. Still awaiting his response on it. I'll put the results on the Disc that I'm going to submit with the system on it I guess.



Minutes: Scribe



Meeting 1 minute

February 11, 2014

Time & Location

CTI Nelspruit Campus, giraffe at 2pm

Attendees

Khethiwe, Sabelo, Tejas, Nelio, Ndumiso

Absent

Shaun

Scribe

Nelio

Agenda

Topics

- Creation of draft CVs
- Deciding on Programming technology to use (language)



Discussion

- Each group member must produce a draft of their CVs to be checked by the client on the next meeting. The CVs must then be unified so that they all follow the same structure and layout
- it was decided that the programming language or technology we are going to use is Java

Next Meeting

CTI Nelspruit Campus, client's office on the 14th of February 2014 at 2pm

Next Meeting Agenda Items

- Correction of draft CVs

Adjournment

2:10pm



Meeting 2 minute

February 14, 2014

Time & Location

CTI Nelspruit Campus, client's office on the 14th of February 2014 at 9am

Attendees

Khethiwe, Sabelo, Tejas, Nelio,

Absent

Shaun, Ndumiso

Scribe

Nelio

Agenda

Old Topics

- Creation of draft CVs
- Deciding on Programming technology to use (language)

New Topics

- Add in project lists to CV and correct mistakes pointed out by client
- Requirements specifications
- Research on competitors



Discussion (old topics)

- Each group member must produce a draft of their CVs to be checked by the client on the next meeting. The CVs must then be unified so that they all follow the same structure and layout
- It was decided that the programming language or technology we are going to use is Java

Discussion (new topics)

- Every group member must correct the mistakes pointed out by the client and add in project lists. We must also note that we have to include 3 references and from those 3 none of them must be relatives.
- Each person must come up with a requirements draft for the project, including functional, non-functional, user and system requirements.
- Each group member must do research on toy suppliers to see how other toy supplying companies function

Next Meeting

CTI Nelspruit Campus, client's office on the 21st of February 2014 at 9am

Next Meeting Agenda Items

- Research on toy suppliers and requirements draft
- Finalized CV

Adjournment

9:47 am



Meeting 3 minute

February 21, 2014

Time & Location

CTI Nelspruit Campus, client's office at 9am

Attendees

Khethiwe, Ndumiso, Tejas, Nelio, Sabelo

Absent

None

Scribe

Nelio

Agenda

Old Topics

- Add in project lists to CV and correct mistakes pointed out by client
- Requirements specifications
- Research on competitors

New Topics

- CV verification
- review of requirements documentation
- deciding on website colour schemes
- cost and review analysis
- inclusion of a team development tab



Discussion (old topics)

- Every group member must correct the mistakes pointed out by the client and add in project lists. We must also note that we have to include 3 references and from those 3 none of them must be relatives.
- Each person must come up with a requirements draft for the project, including functional, non-functional, user and system requirements.
- Each group member must do research on toy suppliers to see how other toy supplying companies function

Discussion (new topics)

- Every group member must fix the minor errors on their CVs
- The company website is going to have 4 colours , the colour divisions we are yet to discuss
- A cost and risk analysis needs to be made to be presented next week for the client to see the software's feasibility
- On our website , we must include a development team tab which consists of a small description of each team member and even a video with the whole team

Next Meeting

CTI Nelspruit Campus, client's office on the 28th of February 2014 at 9am

Next Meeting Agenda Items

- A cost and risk analysis documentation to be handed to the client

Adjournment

10:46 am



Meeting 4 minutes

March 7, 2014

Time & Location

CTI Nelspruit Campus, client's office at 8.59am

Attendees

Khethiwe, Ndumiso, Tejas, Nelio, Sabelo

Absent

None

Scribe

Nelio

Agenda

Old Topics

- CV verification
- review of requirements documentation
- deciding on website colour schemes
- deciding company name
- cost and review analysis
- inclusion of a team development tab



New Topics

- Verification of deliverable 1
- Verify on methodology (research on scrum)
- All requirements are to be in one single document
- UML and RDM diagrams
- Google Harvard referencing
- Add ALC to risk management plan
- Mention assumptions and dependencies

Discussion (old topics)

- Every group member must fix the minor errors on their CVs
- The company name we decided on is ToyToyers , our slogan is “we do it for the toys”
- The company website is going to have 4 colours , the colour divisions we are yet to discuss
- A cost and risk analysis needs to be made to be presented next week for the client to see the software’s feasibility
- On our website , we must include a development team tab which consists of a small description of each team member and even a video with the whole team

Discussion (new topics)

- All documents should be unified and follow a standard layout. UMLs and RDM diagrams should be included.
- Utilization of development tools to auto generate code for ease and efficiency. We should also use Harvard referencing for when using references.
- Adding access control lists to (ALCs) the risk management plan and also adding dependencies and assumptions in the requirements document.

Next Meeting

CTI Nelspruit Campus, client's office on the 7th of March 2014 at 9am

Next Meeting Agenda Items

- Deliverable 2 discussion

Adjournment

10:35 am



Meeting 5 minutes

March 14, 2014

Time & Location

CTI Nelspruit Campus, client's office at 8.59am

Attendees

Khethiwe, Ndumiso, Tejas, Nelio, Sabelo

Absent

None

Scribe

Nelio

Agenda

Old Topics

- Verification of deliverable 1
 - Verify on methodology (research on scrum)
 - All requirements are to be in one single document
 - Check costing
 - UML and RDM diagrams
 - Google Harvard referencing
 - Add ALC to risk management plan
 - Mention assumptions and dependencies
-



New Topics

- Requirements for deliverable 2 , ERD , UML , Class diagrams , input output documents , gui design , Progress reports , reports with future sprints
- Finalized roles
- Do plagiarism reports on all documents and start prototyping
- Use 3rd party software for unit testing

Discussion (old topics)

- All documents should be unified and follow a standard layout. UMLs and RDM diagrams should be included.
- Utilization of development tools to auto generate code for ease and efficiency. We should also use Harvard referencing for when using references.
- Adding access control lists to (ALCs) the risk management plan and also adding dependencies and assumptions in the requirements document.

Discussion (new topics)

- The roles are as follows
 1. Database design: Nelio, Khethiwe, Tejas
 2. Dataflow charts: Sabelo and Ndumiso, Tejas
 3. GUI design: Tejas
- Look at core functional requirements and start prototyping

Next Meeting

CTI Nelspruit Campus, client's office on the 24th of March 2014 at 9am

Next Meeting Agenda Items

- First design on the database ,
- First dataflow chart
- First GUI implementation

Adjournment

11:18 am



Meeting 6 minutes

March 25, 2014

Time & Location

CTI Nelspruit Campus, client's office at 3:00pm

Attendees

Khethiwe, Tejas, Nelio

Absent

Sabelo, Ndumiso

Scribe

Nelio

Agenda

Old Topics

- Requirements for deliverable 2 , ERD , UML , Class diagrams , input output documents , gui design , Progress reports , reports with future sprints
- Finalized roles
- Do plagiarism reports on all documents and start prototyping

New Topics

- A final draft on deliverable 2
- Working together as a team



Discussion (old topics)

- The roles are as follows
- 4. Database design: Nelio, Khethiwe
- 5. Dataflow charts: Sabelo and Ndumiso
- 6. GUI design: Tejas
- Nelio is to work on the ERD diagrams as well.
- Look at core functional requirements and start prototyping

Discussion (new topics)

During the next meeting we must present our client with a final draft of our second deliverable. As group leader, Tejas has given each member tasks to do. Khethiwe, Sabelo and Ndumiso are to produce dataflow diagrams of the work GUI designs that are yet to be sent to each group member. Nelio will do activity diagrams for the interaction between the database and GUI (basically all the functions that take place). Tejas will finalize all the documents and draw the back end GUI design.

Next Meeting

CTI Nelspruit Campus, client's office on the 11th of April 2014 at 9am

Next Meeting Agenda Items

- Final Draft on deliverable 2

Adjournment

4:11 pm



Meeting 7 minutes

April 11, 2014

Time & Location

CTI Nelspruit Campus, client's office at 9:06pm

Attendees

Khethiwe, Tejas, Nelio, Sabelo

Absent

Ndumiso

Scribe

Nelio

Agenda

Old Topics

- A final draft on deliverable 2
- Working together as a team

New Topics

- With the evaluation, look at how load, stress and usability is used and how we are going to use it
- Draw a table to show error messages , the expected types of errors , a small description of the error and the possible (user)solutions
- Designs
- Mentioning and clarification of testing
- Documentation clarification



Discussion (old topics)

During the next meeting we must present our client with a final draft of our second deliverable. As group leader, Tejas has given each member tasks to do. Khethiwe, Sabelo and Ndumiso are to produce dataflow diagrams of the work GUI designs that are yet to be sent to each group member. Nelio will do activity diagrams for the interaction between the database and GUI (basically all the functions that take place). Tejas will finalize all the documents and draw the back end GUI design.

Discussion (new topics)

- We need to draw up a table for errors that the user might encounter, we need to include a small description of the error in the error table and possible solutions for the user
- Designs need to be documented, and making use of class, activity, and data flow deployment diagrams is essential. The design labels should have black borders around them.
- We need to make sure that all of the requirements are in one unified document rather than multiple ones.
- Look up a program called collaborative in order to stay updated with everyone's work

Next Meeting

Undetermined

Next Meeting Agenda Items

Undetermined

Adjournment

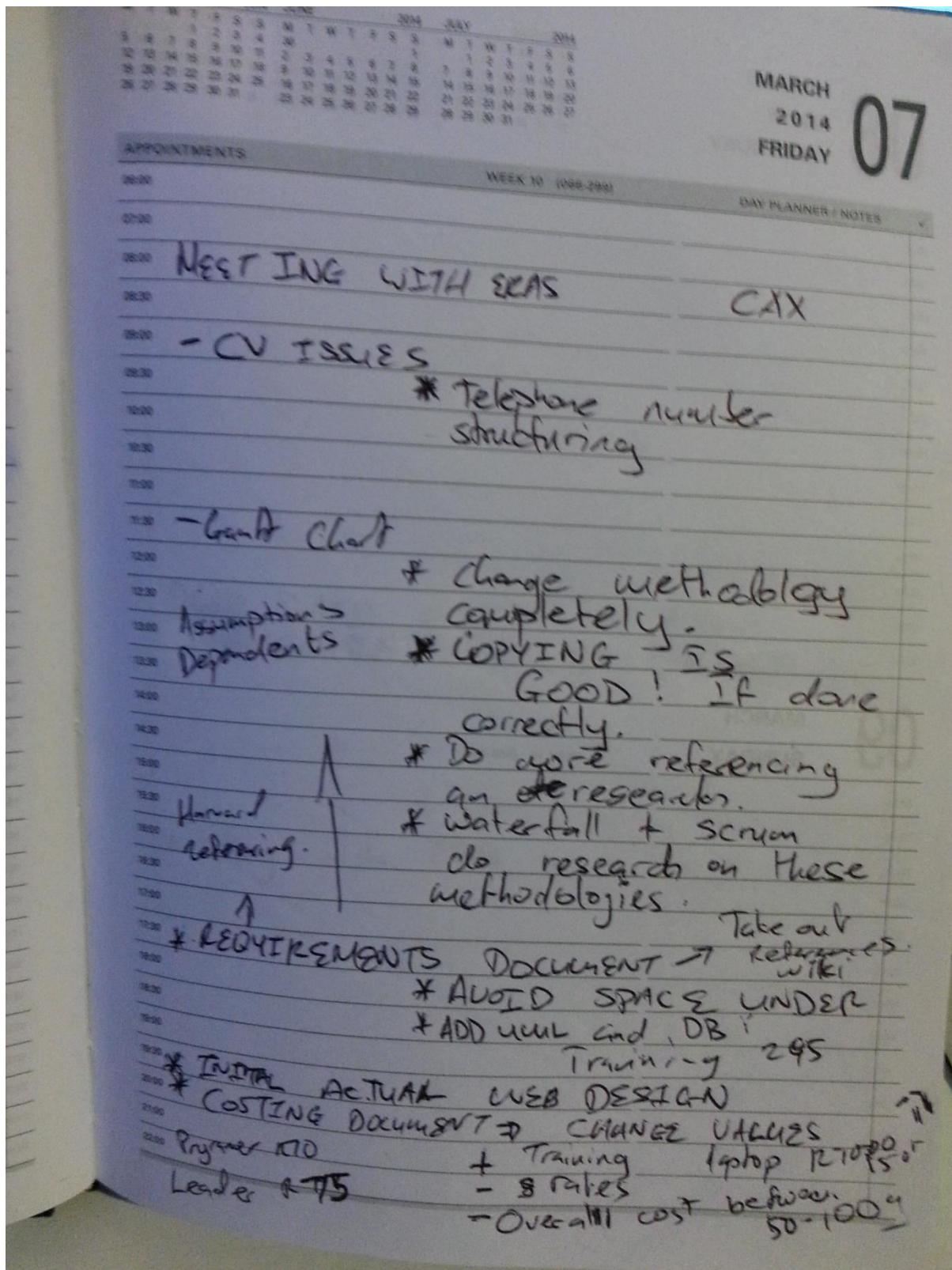
9:09 pm



Project Leader Notes:

FEBRUARY
2014
FRIDAY 21

APPOINTMENTS	WEEK 8 (052-313)	DAY PLANNER / NOTES
06:00		
07:00		
08:00		
08:30		
09:00	MEETING WITH ERAS (CLIENT)	
09:30	MINUTES	
10:00		
10:30	* CU REVISED	
11:00	- WYNAND - SOFTWARE DEVELOPER	
11:30	- EDIT PERSONNEL "I am a...."	
12:00	- INCONSISTENCY IN ALL CU'S	
12:30	- FORMAT ALL FONT	
13:00	- REMOVE ALL LECTURER REFERENCES	
13:30	- NOT JAVA DEVELOPER - C#	
14:00		
14:30	* REQUIREMENTS DOCUMENT	
15:00	- EXPLAIN WHAT EACH OF THE REQUIREMENTS ARE;	
15:30	- REMOVE REDDIT.COM	
16:00	- READ ALL REQUIREMENTS (SAS ELO)	
16:30	- CORRECT DATA (NECZO)	
17:00		
17:30		
18:00		
18:30	* UPTIME ADDITION	
19:00	* ADD DBMS	
19:30	* RISK ANALYSIS OR COSTING	
20:00	* WHERE BREAK EVEN POINT	
20:30	* 5 W'S; who, why, where, when, what, how	
21:00	* CONSIDER SALARIES	
22:00		





MAY		JUNE					JULY					AUGUST							
SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	SUN	MON	TUE	WED	THU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13

WEEK 11 (079-282)

MARCH
2014
FRIDAY **14**

APPOINTMENTS

DAY PLANNER / NOTES

Functional Req Due 22nd April

Meeting Eric → IPO document → CLASS DIAGRAMS

- Design - UML Case, prototyping, 3RD, DATAFLOW
- Implementation - Evaluation Strategy
- Evaluation - test plan GUI DESIGN

* go Party start Testing applications (FINAL)

DELIVERABLE 1 Due scsolo

Reschedule Meeting -

* keep Stake to Tom Fortinfield, b7

DSD - Nelsio, Kethinwe, scsolo

DFD - scsolo, Ndumiso, Tegas

UML - Tegas * Start first working on GUI design

Website - scsolo, Ndumiso, Kethinwe ✓

Backend - Tegas, Nelsio

Database - MySQL, Nelsio, Tegas

redo core functional requirements *

Software Dia, umbrello, GanttML ✓



SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
19	20	21	22	23	24	25	26	27	28	29	30	31	1	2
28	29	30	31	1	2	3	4	5	6	7	8	9	10	11

APPOINTMENTS

DEADLINES

TO DO LIST

Meeting with EADS

Planning on drop beam (square size)
of padding in

Due on April 2014

- Draft Deliverable 2.
- Design - UML, Class, ERD.
- Implementation
- Evaluation - Test Planning



10

APRIL
2014
THURSDAY

MARCH 2014					APRIL 2014					MAY 2014					
M	T	W	T	F	S	M	T	W	T	F	S	M	T	W	F
31		1	2	3	4	5	6	7	8	9	10	11	12	13	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
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17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
24	25	26	27	28	29	30	28	29	30	29	30	28	29	30	

APPOINTMENTS

WEEK 15 (100-266)

DAY PLANNER / NOTES

06:00

07:00 * TESTING Documentation is ksk

08:00

08:30 Redocument

09:00

09:30 * IMPLEMENTATION

10:00 went happened

10:30

11:00 ↑ - TOPIC COMPLETED

- TROUBLES FACED
- How IT was solved?

12:00 DESIGNS

13:00 * INCORPORATE DFACRABUS DO DOCUMENTATION

13:30

14:00 * ALL DIAGRAMS ADD CAPTIONS

15:00

15:30

16:00

16:30 * PUT ALL IN ONE DOCUMENT.

17:00

17:30 * COLLABORATING

18:00 * BURN DOWN LOGS / QUESTIONS

18:30 * USE KANBAN

19:00

19:30 * Float to left.

20:00

21:00

22:00

JUNE		
M	T	W
30		
1	2	3
8	9	10
15	16	17
22	23	24

APPOINTMENTS
06:00
07:00
08:00
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22:00



24 25 26 27 21 22 21 22 23 24 25 26 27 18 19 20 11 12 13 14 15 16 17
28 29 28 29 30 31 25 26 27 28 29 30 31

2014

FRIDAY

APPOINTMENTS

WEEK 15 (101-264)

DAY PLANNER / NOTES

- 06:00
- 07:00 * Make sure I know all stuff about everything in the document.
- 08:00
- 08:30
- 09:00 MEETING ERAS
- 09:30 * Check Critical Path
- 10:00 * Document All Designs.
- 10:30
- 11:00 * Table for testing page
- 11:30 * Testing page for each web page
- 12:00 - Possible errors + controls
- 12:30 - Learn from google
- 13:00 - User friendly needs
- 13:30
- 14:00 * Edit Roles for Testing capabilities
- 14:30 - Assign all individuals
- 15:00
- 15:30
- 16:00 * Make sure, all testing sources are operational and will perform
- 16:30
- 17:00
- 17:30 * Research programs that can be used in Unit Testing.
- 18:00
- 18:30
- 19:00 * Another Book - ISE
- 19:30 * Forward website designs to ERAs in the afternoon, or in the morning.
- 20:00
- 21:00
- 22:00



9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7
23	24	25	26	27	28	29	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	
25	26	27	28	29	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	
26	27	28	29	28	29	29	30	30	31	1	2	3	4	5	6	7	8	9	10	11	12	

APRIL
2014
FRIDAY **25**

WEEK 17 (119-290)

APPOINTMENTS

DAY PLANNER / NOTES

06:00 * Version change

07:00

08:00 * Big jump by number - small change by decimal

08:30 Meeting with EIAS

09:00 Risks based on EEDBASIC

10:00

10:30 - Risks are not objective

11:00 - Not clear

12:00 - Revise and think about what EIAS.

13:00

13:30 * USE OOP

14:00 * JSP minimal, lots of implementation

14:30 * Rembo not case sensitive!

15:00 * Project for PDF

15:30

16:00 * RECREATE REPORTS

16:30

17:00 * Auto-Generated Reports

17:30

18:00 * CSS/HTML JAVA SCRIPT All THE THINGS

18:30

19:00

19:30 codecademy.com

20:00

21:00

22:00



17

JUNE
2014
TUESDAY

APPOINTMENTS

06:00

07:00

08:00

08:30

09:00

EKAS aonic.

09:30

10:00

~~STIE~~ SICYPE NELIO
Read Interfaces!

10:30

11:00

11:30

12:00

12:30

13:00

13:30

14:00

14:30

15:00

15:30

16:00

16:30

17:00

17:30

18:00

18:30

19:00

19:30

20:00

21:00

22:00

~~TA~~ Research performance
outtime checks and
possible outcome deliveries.~~TA~~ try and do centralization
of and KPI for some
PDFS' to be not
used.

MAY							JUNE							JULY								
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	F	S	S	M	T	W
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	
24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

WEEK 26 (168-192)

DAY PLANNER / NOTES

AUGUST						
M	T	W	T	F	S	S
4	5	6	7	8	9	10
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APPOINTMENTS

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ToyToyerz

Requirements Specifications

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1. Introduction

1.1 Purpose

This document describes the user requirements for Toy Toyerz Supply Chain as requested by Eras Botha, a member of Toy Toyerz Supply Chain and Internal Client for this project. The Information Management System is designed to;

- o Display information about the goods offered by the supply company
- o Try to attract new cliental
- o Allow for registration as a customer to the supply company
- o Place orders online
- o Allow for staff to be able to process sales, orders and invoices faster, in an automated system
- o Display product performance metrics, as well as display performance reports based on the required criteria

It is intended to be read by:

- a. Toy Toyerz Supply Chain, so that they know what they are buying
- b. CAX(Coding At Xtremes) as developers, so they know what to develop



1.2 Scope

The scope of the project is one fully functional stand-alone web application. The system includes a database, an online interface and the website management system.

The main purpose of the online application is to improve marketing and public relations of the manufacturer, as well as automate existing stock handling systems, sales systems and a management system for all incoming and outgoing stock. The application should be able to lessen the work of staff at the toy supplier, as well as create computer-based Management Information System to help Toy Toyerz Supply Chain function more productively and efficiently as well as provide a means for the introduction of the performance metrics from the new machines into the production planning process.

The application should contain nicely crafted home page, contact information, sections displaying all of the goods available for distribution along with pricing and so on, an orders page for potential customers to place orders, a member's area where customers can register on to the system of the Toy Toyerz Supply Chain. It should also have a section for internal staff to perform stock taking, carry out performance metrics, and print out reports as well as process sales, invoices and orders.

The database will store necessary information about;

- All of the goods in stock
- All of the staff members that need access to the database
- All customers linked to the supplier, orders, sales, invoices
- Information required for the systems administrator to perform maintenance as needed to allow easy management of the system.



1.3 Acronyms and abbreviations

Acronyms and abbreviations

F-UR	Functional User Requirements
NF-UR	Non-functional Requirements
TTSC	Toy Toyerz Supply Chain

1.4 Overview

This document has been divided into 2 segments; User Requirements, and System Requirements.

The user requirements segment contains the high level description of the whole system that can be easily understood by non-technical person. It presents the functional capabilities of the system, identifies the constraints and defines the stakeholders of the project.

The system requirements segment describes functionality and constraints of the system in more details. It contains the activity diagrams and detailed description of the use cases identified in the user requirements part of the document. The full matching between sections has been maintained. The constraints of the system were divided into relevant categories and described in depth.



2. General Description

2.1 Product Perspective

This system is being developed for Toy Toyerz Supply Chain and will have similar capabilities as Just Fun Toys, Hasbro, and Pegasus Toys. This is a completely new System being developed for use by individuals, staff of TTSC, and managers of TTSC.

2.2 General Capabilities

Functional Requirements

These are requirements that form part of the core operations that the product or system must perform in order for the system or product to operate as it should.

There are 6 main functional requirements

- **Users shall be able to manage stock control**
Stock management functions will now be automatic, stock will be added to a database and referenced by barcodes. Existing stock, required stock, and stock that may be perishable will be listed upon user request
- **Processing of sales, orders and invoices shall be automated for the user**
Sales, and orders will now be able to be performed online, all invoices will be managed by the automated management system, and records of all invoices will now be stored for future reference. Orders, sales and quotes will also now be easier to produce
- **Plant performance reporting system will be in place**
Schematics and reports will be accessible upon user request based on the criteria provided by the user for the report
- **Product performance metrics shall be included**
Metrics on how stock movement is progressing will also be accessible
- **Statistical information shall be produced daily**
All information relating to all operations of the business will be available in report or graphical formats
- **Metric determination will be based on a number of factors, ranging from daily sales, inventory present at any given time, amount of stock sold**



Non-functional Requirements

These are requirements that are not specifically important for the system to operate, but are necessary for the system to perform better, or have a better appearance.

The Non-functional requirements can be seen as

- With regards to security , the system will prevent the user from logging for a certain time if he/she types in his/her password incorrectly more than 3 times
- The system interface will have the company logo and (client specified) appealing colors
- The password is encrypted using substitution ciphers when being stored in the database
- The system(or server) will be able to handle over 10 users at once
- The uptime of the system will be 99.99%
- The database will be backed up using the incremental data repository method
- Safety standards under the Toys (Safety) Regulations
- A comments page shall be available for customers of the supply chain to leave remarks
- User friendly interfaces shall be designed to handle inexperienced users

User Requirements

These are the requirements that can be stated as what will be provided for the user in order to operate the system effectively and efficiently.

The user requirements can be seen as

- Tutorial Videos shall be in place to assist the user
- An Affinity Diagram presentation and workshop shall be put in place
- Detailed documentation and troubleshooting guides will be provided
- 3 minute presentations, as well as guided initial tour of operating the system



2.3 General Constraints

The main functionality of the system will be accessed by the employees of TTSC, through the online interface. Managers and employees of TTSC will require passwords in order to be granted access to the system and all staff will have a different level of login authority based on what they are allowed to access. The way data is viewed and manipulated will be different for the managers and the staff of the company.

It has been agreed that the system be built to run on Windows based operating system, Windows 7. And shall be operational and have full accessibility on a daily basis.

Training will be provided for all staff and managers once the system is fully operational and finalized. Time shall be allocated for this once the system is completed. Along with hands on tutorials, video tutorials as well as a troubleshooting manual and help guide will also be provided.

The database should be flexible for all staff, stock and invoicing operations.

The costs of the project shall be in correlation with Project costing figures that shall be mutually agreed upon by the client as well.



2.4 User Characteristics

- Unregistered clients
- Registered clients
- Registered staff
- Administrators
- Managers

The following user characteristics will be maintained by utilizing an ACL (Access Control List), which will designate and authenticate the different levels of access that each type of user has when accessing the web interface.

The database will be used on a daily basis by managers and staff to update quotes, orders and inventory. None of the staff will be knowledgeable in the use of the new database but will be educated through tutorials. Managers will also require some training. The IT department may need to re-install or upgrade the database following hardware upgrades or failure, or following software upgrades.

2.5 Operational Environment

The database management system will be run on the Windows Operating System, with this in mind, the customer will not need to upgrade his software as the system will function on his platform.

2.6 Assumptions and dependencies

Assumptions have been dealt with in the Risk Management Document, and dependencies covered through the Gantt Chart.

REFER TO APPENDIX D, Gantt Chart



3. Specific Requirements

3.1 Capability Requirements

F-UR 1 Allow sales, ordering and quotations through a web interface.

Need: Essential Priority: Phase 1

- F-UR 1-1 Place existing and add stock into the database through the staff web interface. The following details about the inventory will be required;
- Barcode of Product (essential)
 - Name of Product (essential)
 - Description (essential)
 - Quantity (essential)
 - Category (essential)
- F-UR 1-2 Allow for interested companies to register as companies through a public web interface. Details required for registering are as follows;
- Company ID (essential)
 - Contact Name (optional)
 - Contact Surname (optional)
 - Date of Birth (optional)
 - Company Name (essential)
 - Address of Company (essential)
 - Telephone Number (essential)
 - Fax (optional)
 - Email Address (essential)
 - Banking Details (optional)
 - VAT No. (essential)
 - Tax No. (essential)
- F-UR 1-3 Allow for registered companies to place orders through a public web interface. Details required for ordering are as follows;
- Company ID (essential)
 - Product ID (essential)
 - Quantity (essential)



F-UR 1-4 Allow for staff to process, access and print invoices through a public web interface. Details required for invoicing are as follows;

- Company ID (essential)
- Invoice ID (essential)
- Date (essential)

F-UR 1-5 The system will be able to process multiple online transactions at the same time.

F-UR 1-6 The management system will process sales, quotes and orders on a first come first server basis.

F-UR 1-7 Once a transaction is successfully completed, a confirmation and proof of the transaction will be shown on-screen as well as an email sent to the companies email address

REFER TO APPENDIX A

F-UR 2 The system will generate reports and display performance metrics

Need: Essential Priority: Phase 2

F-UR 2-1 The system will generate reports detailing statistical breakdowns of;

- Production performance
- Stock levels
- Sales performance
- Profit and losses
- The performance of the plant relative to incomings and outgoings.



3.2 Constraint Requirements

3.2.1 Hardware

NF-UR 1-1 The system shall be installed on the Windows Operation System, running Windows 7

NF-UR 1-2 Reports shall be printed in black and white

NF-UR 1-3 This system shall be installed by CAX

REFER TO APPENDIX B AND C

3.2.2 Software

NF-UR 2-1 The system shall enable concurrent frequent access

NF-UR 2-2 Any issues encountered during the first 6 months of operation of the system, shall be fixed by CAX free of cost

3.2.3 Data

NF-UR 3-1 The system shall cater for an unlimited amount of stock

NF-UR 3-2 The system will not allow for incorrect data to be inputted

3.2.4 Security

NF-UR 4-1 Only managers will have full access to the Systems functionality

NF-UR 4-2 Staff will only have certain allowances when interacting with the database

NF-UR 4-3 The levels of access of the database are as follows;

- Sales, orders, quotes – Registered Customers
- Database editing (limited) – Staff
- Full control, report generation – Managers

NF-UR 4-4 Orders may be cancelled but only within a 24 hour period



3.2.5 Reliability

NF-UR 5-1 The only time when the system will be down, is when there server connection is severed

3.2.6 Legislation

NF-UR 6-1 All details provided by customers will be managed in accordance to the Data Protection Act

NF-UR 6-2 All of the data stored on the system will be in conjunction with the privacy policy of TTSC

3.2.7 Robustness

NF-UR 7-1 All possibilities of errors occurring will be avoided as best possible, and uptime from an error will be fast

3.2.8 Time

NF-UR 8-1 The final system shall be finalized and completed for presenting and demonstrating on August, 20th 2014

3.2.9 Costs

NF-UR 9-1 This system will be completed with the costs agreed upon in the Project Costing document by the client and the development team

3.2.10 Usability

NF-UR 10-1 The system will be as user friendly as possible. Inexperienced users will be taught how to use the system effectively

NF-UR 10-2 A user manual for the system will be provided



3.2.11 Forgiving

NF-UR 11-1 There will be appropriate messages and manners to deal with errors that might occur in the system, and this will assist the user to react in a better manner

4. References

Sommerville, I. 2011. *Software Engineering*. 9th Edition.
Boston: Pearson.

Jeffrey Pinto, K. 2013. *Project Management*. Achieving Competitive Advantage. 3rd Edition.
Boston: Pearson.



Version Log – Requirements Document

Version	Authors	Date	Reason For Change
1.0	Tejas Dwarkaram	30/02/2014	Added functional and non-functional requirements
1.1	Tejas Dwarkaram	01/03/2014	Revised constraints
1.1.1	Tejas Dwarkaram	03/03/2014	Spell Check Performed
1.2	Tejas Dwarkaram	10/04/2014	Added general capabilities
1.3	Tejas Dwarkaram	10/10/2014	Revised document, changed functions
1.3.1	Tejas Dwarkaram	11/10/2014	Final spell check performed



ToyToyerz

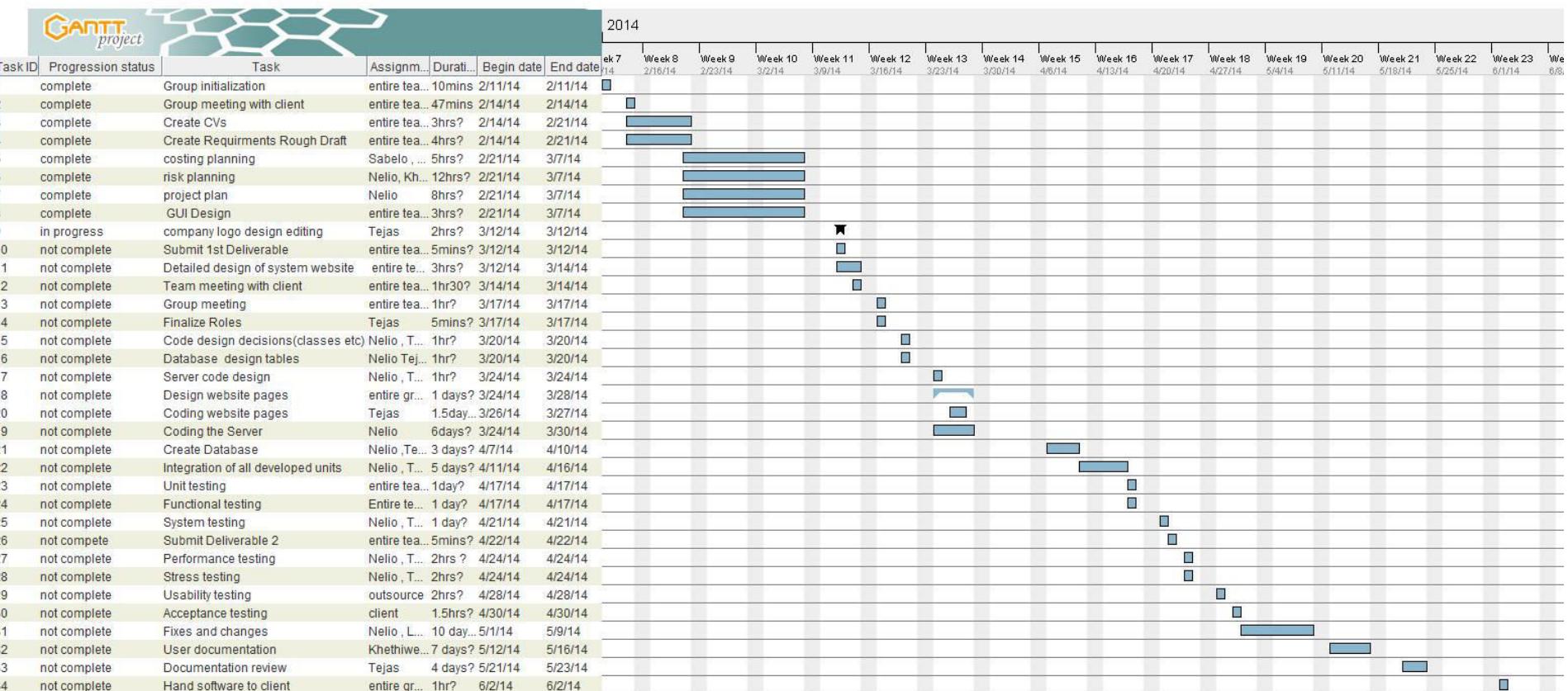
Project Plan (Original)

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13/04/2014







Version Log – Project Plan(Original)

Version	Authors	Date	Reason For Change
1.0	Nelio Lucas	05/02/2014	Revised Roles for Tasks
1.1	Tejas Dwarkaram	10/02/2014	Changed system architecture, so roles had to be altered
1.2	Nelio Lucas	27/02/2014	Updated tasks, new testing modules included
1.2.1	Tejas Dwarkaram	08/03/2014	Revised Gantt Chart, and performed Spell Check



ToyToyerz

Costing

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Version Log – Project Costing

Version	Authors	Date	Reason For Change
1.0	Tejas Dwarkaram	16/02/2014	Researched software, and decided on openSource alternative for Database Management
1.1	Tejas Dwarkaram	22/02/2014	Added costs of Hardware, after Quotes were received
2.1	Tejas Dwarkaram	09/07/2014	Changed required hardware values, after risks occurred
2.1.1	Tejas Dwarkaram	11/10/2014	Spell check performed, and costs verified



ToyToyerz

Risk Analysis

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Introduction

Purpose

The purpose of this document is to identify possible risks that could have a negative impact on the scheduling, group members, resources, costs and overall performance of the project. By identifying the risk, our group can rapidly address the risk and minimize or avoid the risk as much as possible.

Intended Audience

This risk management plan is directed at:

- The Project Team
- The Client (stakeholder)

The Project Team

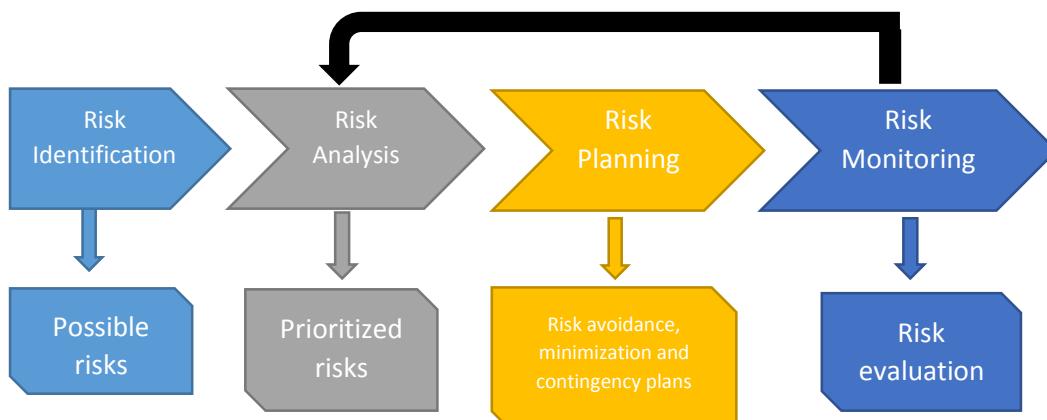
The project team will be taking full responsibility for risk identification, risk analysis, risk planning and risk monitoring.

The client

The client will be the one using the software, which means that he will also take part in risk monitoring which would include identifying any errors that may occur with the system and notifying us (the developers).

Risk management process

The risk management process involves utilizing a looping method where by the risk is continuously analysed after monitoring, if the solution is seen to be unfit, reanalysing the risk is necessary.





Risk Identification

These are the different types of risks we have identified

Risk ID	Risk	Type	Description
R1	Group member issues	Project : people	Vital skilled members may become ill during important or critical times of the software development or decide to leave the group due to personal issues
R2	Software compatibility issues	Product + Business: technology	Errors may occur due to outdated drivers or negative responses during software utilization (software crash, reduction in overall pc performance) and software development
R3	Programming knowledge	Project: people	Some group members might not have enough programming knowledge with Java and fail to understand the code and or fail to program
R4	Computer virus	Product + Business: technology	Computer viruses may cause the software to crash, perform slowly or force the software to perform unexpected actions that force the computer to crash
R5	Unsaved changes and changes when coding	Project: technology & people	Programmers forgetting to save changes made or making changes that may cause unexpected errors to occur or possibly the whole system to crash
R6	Client or end user does not make use of the software	Project: people	The client does not make use of the software
R7	Technological changes	Product: technology	The tools, hardware and other components used to produce and run the software may become outdated or obsolete.
R8	Failure to accomplish tasks by giving dates	Project: people	Team members miss target dates for task completion



R9	Group conflicts	Project: people	Misunderstandings and arguments between group members
R10	Constant software spec and requirement changes	Project: people	The client constantly makes changes in the system design and system requirements which could delay the project
R11	Eskom electricity	Project: product	Power outages may cause the development teams' computer to crash during coding or program testing
R12	Fires breaking out in software development facility	Project: tool & people	Fires breaking out causing development tools and equipment to sustain damaged or become destroyed. The equipment and tools aren't the only things at risk, the group members are also at risk of injury and even death as well.

Risk Analysis

After identifying the risks, a risk analysis is performed. The risks analysis allows us to see what the impacts and probabilities of the risks are.

The impacts caused by the risk will be measured by using the terms insignificant, tolerable, serious and catastrophic.

The probability of the risk occurring is measured by using the terms low, medium, and high.

The risk priorities are defined by using the following colours

Priority	Colour
Low	Green
Medium	Yellow
High	Red



Risk Planning

Risk ID	Risk	Impact	Probability
R1	Group member issues	Serious	Medium
R2	Software compatibility issues	Serious	Low
R3	Programming knowledge	Tolerable	Medium
R4	Computer virus	Catastrophic	Medium
R5	Unsaved changes and changes when coding	Serious	Medium
R6	Client or end user does not make use of the software	Serious	Low to medium
R7	Technological changes	Serious	Low to medium
R8	Failure to accomplish tasks by giving dates	Serious	High
R9	Group conflicts	Serious	Medium
R10	Constant software spec and requirement changes	Serious	High
R11	Eskom electricity	Serious	Low
R12	Fires breaking out in software development facility	Catastrophic	Low

The risk planning conducted includes solutions (strategies) for solving each risk identified. Each strategy involves an avoidance strategy, a minimization strategy and a contingency plan.

There are three types of strategies that can be used to address a risk:

Avoidance strategy – these are methods used to avoid a risk.

Minimization strategy – these are methods used to decrease the impacts of the risks.

Contingency strategy – these are procedures that are followed when the risk has occurred in order to handle the risk.



Risk – group member issues (R1)

Avoidance

Group members must alert other members before hand with a justifiable reason as to why they will not be present.

Minimization

Ensure that there is another member in the group that can take the role of the absent group member.

Contingency

Job rotation – group members must be familiar with the roles of other group members in order to keep the development of the system unhindered in terms of time, quality and costs.

Risk - Software compatibility issues (R2)

Avoidance

Make sure that the development tools and the developing software is compatible with the operating system it is running under.

Contingency/Minimization

Ensure that you have installation disks or other storage devices with the necessary drivers, updates and other components for resolving the compatibility issue. Also make sure that a backup of the tools and code for the system is kept on another computer so that work progress is not significantly affected.

Risk – Programming knowledge (R3)

Avoidance

Make sure that the programmers know their work, and know how to program as well as they say they can.

Minimization

Every programmer must spend at least 1hr a day doing some research on the programming language being used to develop the software, not to mention doing a few exercises.

Contingency

Introduce 2 week workshops for programmers in order for them to broaden their understanding on the language or languages being used for the development of the system.



Risk – Computer virus (R4)

Avoidance

Make sure every computer that is being used for the development of the software has an antivirus and only relevant applications installed on the computer to prevent further security risks and system vulnerabilities.

Minimization/ Contingency

Make daily or weekly backups of the source codes, development tools and other important documentation. This will prevent any delays in the progression of the systems development because programmers and other group members may resume work on other computers.

Risk – unsaved changes and changes when coding (R5)

Avoidance/Minimization

Set the IDE to auto save the code periodically during programming and keep saving copies of edited.

Contingency

Use the saved copies of old code and resume coding from there. The old copy should be recent and not too outdated.

Risk – Client or end user does not make use of the software (R6)

Avoidance

Make sure that the software meets the requirements set out by the user.

Minimization

Set out meetings with the client in order to allow him to specify exactly what he wants the software to do , how it looks like and any other relevant specifications .

Contingency

Re modify the system to meet the actual requirements and specifications that the client wants. Hold meetings to periodically verify and confirm changes if the client specifies any.

Risk – technological changes (R7)

Avoidance /Minimization

Keep up to date (by downloading patches or updates) with the latest updates for development tools, IDEs (Integrated Development environments) and other relevant technologies.



Contingency

Buy or download the latest complete setup for modern development tools, IDEs and other software that may be required for the development of our system.

Risk – failure to accomplish tasks by given dates (R8)

Avoidance

Create a Gant chart to make sure that each team member is aware of the work that he/she needs to do and the time allocated for the task to be completed.

Minimization

Depending on the personal skills of a team member, he or she can assist another member with his/her tasks to reduce completion time (note: a group member can only do so if he/she has completed his/her task).

Contingency

The task that is not completed must now have high priority and every (or most) team members must pause their current activities to assist in rapidly completing the task. (Note: a justification for delay must still be presented to the client).

Risk – group conflicts (R9)

Avoidance

During the storming and norming stages of the group's team development, every group member must be (well) acquainted with each other and on good terms in order to prevent future misunderstandings.

Minimization

During group discussions, avoid directly pointing the blame of a project failure to a member, do not turn discussions into arguments and prevent provoking or irritating group members.

Contingency

If group members are engaged in any form of conflict, a meeting must be held with all parties and a mediator must listen to all the reasons from all parties for the occurrence of the conflict and decide upon a solution that both parties agree on.

Risk – constant software specifications and requirement changes by the client (R10)

Avoidance

During the first few meetings, the client will be notified that changes to the software specifications will no longer be acceptable after the project progression has reached a certain level (example: the project has reached the half way mark in the allocated time to finish the project).



Minimization/Contingency

During each meeting with the client, make sure that the client is comfortable and satisfied with the current progression of the software.

Risk – Eskom electricity (R11)

Avoidance

Make sure the computer that is being used for coding is equipped with a UPS or use a laptop.

Minimization

Keep laptops and UPSs fully charged at all times.

Contingency

Save any unsaved changes while coding or producing important documents, back them up and also save it into a flash so that whoever is responsible for coding and other documents can continue their work in another facility(ex: home).

Risk – fire breaks out in software development facility (R12)

Avoidance

Utilize facilities that are not prone to any fire hazards (ex: stay away from facilities near gas stations). Make sure that the facility the group works under is constructed with fire retardant material.

Minimization

Ensure that the facility is equipped with “anti-fire” equipment such as fire extinguishers, make sure that the facility includes emergency exits and make sure that the project team runs through any necessary safety procedures.

Contingency

Make sure that all vital pieces of code and other documents are backed up then follow safety procedures to leave the facility unharmed.

Risk Monitoring

Definition

This is the phase where the identified risks are examined for the purpose of checking if or if not the impacts of the risks have intensified or reduced and also to check if the probability of the risk has increased or decreased.



Risk: group member issues (R1)

Every group members must be on the lookout for any abnormalities amongst group members such as constant absence and any signs that indicates that a team member(or team members) is showing signs of disinterest in the project which could lead to him/her leaving the project team.

Risk: software compatibility issues (R2)

Programmers and anyone making use of the allocated computers to work must keep an eye out for any system glitches, system errors that may seem harmful during coding, unit testing or simply typing out documentation. Also make sure that the developing software does not show any signs of “non-code-error” errors.

Risk: programming knowledge (R3)

Assess and examine the code of the group’s programmers by randomly asking them to run the code for the software. If there are constant building errors every time a programmer is asked to run the software code, then refer to the risk planning section of this documents for guidance.

Risk: computer virus (R4)

Keep an eye out for suspicious activities like slow computer performance, increased CPU usage, unknown files on the desktop and/or project directories , error messages popping up on the screen and common errors such as “explorer.exe” and “rundll32.exe” not responding with regards to the operating system being used.

Risk: unsaved changes and changes when coding (R5)

Group members that are coding or typing out documents must make sure that they are constantly saving their work and backing them up as required of them in the above section (risk planning).

Risk: client or end user does not make use of the software (R6)

During unit testing, assess the system to see if the requirements specified by the client are met. Keep an eye out for any errors and see if the system functions perform as they should.

Risk: technological changes (R7)

If the development tools are updated, assess and monitor the performance of the software during coding and unit testing to see if the system functions properly after the new update has been applied.



Risk: failure to accomplish tasks by given dates (R8)

If tasks are not completed by given dates, monitor and control every team member that has diverted from their original task to assist in completing the task delayed task (refer to the contingency plan for risk R8).

Risk: group conflicts (R9)

After group conflicts are supposedly resolved, monitor team members to make sure that they are happy or satisfied with the decisions made by the mediator. Also keep an eye out for any sort of tension between group members. If any more conflicts arise, report it to the group leader.

Risk: constant software specifications and requirement changes by the client (R10)

After each meeting with the client, and during the application of the client specifications, double check (or check as many times as necessary), to ensure that the specifications are set and applied exactly as specified by the client. Report anything that does not comply with the specifications to the group leader.

Risk: Eskom electricity (R11)

After all information is saved and backed up (if any power failures were to occur), verify that the information stored in the storage devices (as backup) is not corrupted.

Risk: fire breaks out in software development facility (R12)

Evaluate group members by periodically asking them what the safety procedures are in case a fire breaks out. In the event that a fire does break out keep an eye out for group members that may show signs of cluelessness on what to do and after everyone is out of harms reach , group members must mentally acknowledged their performance during the evacuation, make room for correction and if need be , redefine better methods of handling the situation.

The following are tables that indicate the risk impact and probabilities of the risks in details.

Probability	Matrix Value	Rate of Probability	Description
Low	0.25	10-25%	More likely not to occur than occur
Moderate	0.5	25-50%	May or may not occur
High	0.75	50-75%	More likely to occur than not



Impact	Matrix Value	Description
Insignificant	0.1	The impact is little
Tolerable	0.25	The impact is manageable
Serious	0.5	The impact is severe
Catastrophic	0.75	possible project failure



Version Log – Risk Management Document

Version	Authors	Date	Reason For Change
V1.1	Tejas Dwarkaram	24/5/2014	Alteration to risk management document due to exaggerated impact level for risks 1 and 11.
V1.2	Nelio Lucas	17/7/2014	Alteration of the layout and font of text in the risk identification table due to font being too small
V1.3	Tejas Dwarkaram	19/7/2014	Removal of the priorities table in the risk monitoring section, it was redundant
V1.3.1	Nelio Lucas	28/7/2014	Colour coding for risk planning changed for a clearer understanding
V1.3.2	Nelio Lucas	5/10/2014	Final spell check



ToyToyerz

CV's

Group 1:

Tejas Dwarkaram – H00182776
Nelio Lucas – H00182777
Ndumiso Mkhatshwa – H00182874
Khethiwe Ngwenya – H00182866
Sabelo Mabuza – Pending



AREAS OF EXPERTISE

Microsoft Office

UML

MSSQL

Network +

Linux

Security +

Convergence +

Software Development

Project Management

PERSONAL SKILLS

Problem Solving

Communication

Multi-tasking

Working under pressure

Team Worker

PROJECT LIST

Forum Website- Java

Video Store Management Software- Java

Website designed for a Pre/Primary School

PERSONAL DETAILS

Tejas Dwarkaram

8 Riverview Village,

Riverview,

Malelane

1320

T: +27 61 470 6522

C: +27 82 942 4982

E: tejas.dwarkaram@gmail.com

ID No: 9311225169087

Driving License: Yes

Nationality: South African

Tejas Dwarkaram

Java Developer

PERSONAL SUMMARY

I am an enthusiastic individual eager to explore the core essence of Information Systems. With a year of practical experience, along with a fresh analytical mind, creative thinking and design, and good problem solving capabilities. Great team worker, along with excellent communication skills.

Interested in forging a relationship with upcoming IT firms, from which we can help each other achieve great heights in the field of Information Systems.

KEY SKILLS AND COMPETENCIES

- Good core Java Development experience.
- Knowledge and practical experience with SOAP, ANT and XML.
- Understanding of JBoss, GlassFish and Tomcat.
- Vast knowledge of JDBC tools and relational databases.
- Good team worker, listening and communicating skills.
- Web Development: Knowledge of HTML, JSP, Servlets.
- Database: MS SQL Server, Microsoft Access.
- Software Development: J2EE, J2SE, J2ME, C#.
- Good knowledge of web services, servers as well as developing them.
- Knowledge and experience with Linux based Operating Systems, Windows XP, Windows 7, Windows 8, Windows 8.1.

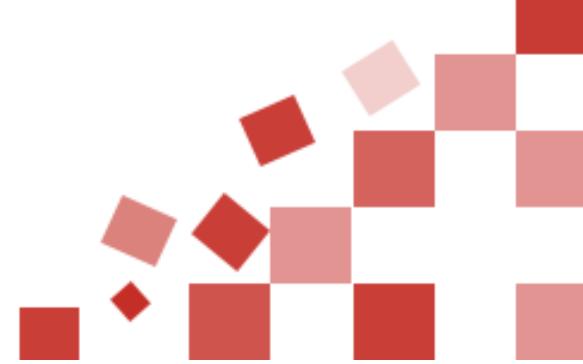
ACADEMIC QUALIFICATIONS

National Senior Certificate

Beacon College Malelane **2011**

HND Computer Sciences

CTI Education Group **2012-2013**





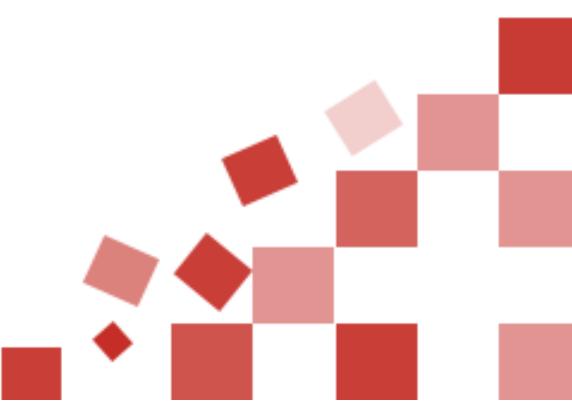
REFERENCES

Name: ***Ms. X.M Ntuli***

Position: ***Manager Beacon College***

Contact Details:

+27 82 631 4973 / +27 83 344 4895



Name: ***Mr P. AS Nair***

Position: ***Principal Suikerland High School***

Contact Details:

+27 84 580 9162

Name: ***Mr W. Willers***

Position: ***Software Developer***

Contact Details:

+27 79 259 4649

AREAS OF EXPERTISE

Visual Programming and Fundamentals (VPRF)
Fundamental Computer Sciences (FCSC)
Networking Concepts (NETC)
Introduction to Information Systems (IISY)
Mathematical Computer Sciences (MCSC)
Human Computer Interaction (HCII)
Visual Programming (VPRO)
Personal Skills Development (PSKD)
Database Design Concepts (DBDC)
Object Orientated Programming (OOPR)
Internet Server Management (ISMN)
Integrated System Analysis and Design (ISAD)
Data Analysis and Design (DAND)
Networking Technology (NETT)
Project Management (PROM)
Data Structures and Algorithms (DSAL)

PERSONAL SKILLS

Creative Thinker
Talkative (Friendly)
Problem Solver

PROJECT LIST

*Created an animal game for kids 1-5 years old
In C# project*

PERSONAL DETAILS

Khethiwe Raynell Ngwenya

T: +27 76 214 5963

E: khetty.ngwenya@gmail.com

ID No: 9203260432084

Nationality: South African

Khethiwe Ngwenya

C# Developer

PERSONAL SUMMARY

I am a highly motivated and skilled C# developer, knowledgeable in the usage of modern tools. Also with expertise in database integration for the creation of management systems and computer algorithms. A creative thinker with problem solving skills.

KEY SKILLS AND COMPETENCIES

- C# and Java languages experience.
- Ability to identify and solve simple and technical problems
- Good team worker, listening and communicating skills.
- Well knowledgeable in database administration creation
- Good team worker with significant creative and problem solving skills.
- Database: SQL server

ACADEMIC QUALIFICATIONS

National Senior Certificate

Hoerskool Rob Ferreira **2010**

HND Computer Sciences

CTI Education Group **2012-2013**



REFERENCES

Name: ***Mr JJJ Van Rensburg***

Position: ***Principal***

Contact Details:

+27 13 755 2500

Name: ***Mr Allen Maziya***

Position: ***Lecturer***

Contact Details:

+27 79 419 1516

Name: ***Mr Piet Smith***

Position: ***Academic Co-ordinator***

Contact Details:

+27 13 755 3918

AREAS OF EXPERTISE

*MySQL
Microsoft Office
Hardware essentials
Networking & Security
Linux Operating System
Linux Administration
Convergence
Software development
Project management*

PERSONAL SKILLS

*Problem solving
Creative thinker
Reliable
Dependable*

PROJECT LIST

Database management system:

- Flight management system
- Tennis Tournament management system

PERSONAL DETAILS

Nelio Lucas

79 Oroblanco Street

Nelspruit

T: +27 79 972 3493

E: J.Plucas@hotmail.com

Passport No: 10AA686103

Driving License: No

Nationality: Mozambican

Nelio Lucas

C++ developer

PERSONAL SUMMARY

I am a skilled C++ developer, knowledgeable in the usage of modern tools for the development of processor and memory efficient software .Also with expertise in C++ and Database integration for the creation of management systems. A creative thinker and problem solver with a year of practical experience and a never ending thirst to learn more. I aim to work together with modern IT companies to build my skills and build the company.

KEY SKILLS AND COMPETENCIES

- Strong core C++ development experience.
- Ability to identify and solve simple and complex technical problems
- Well knowledgeable in the creation of computers servers
- Good team worker with significant creative and problem solving skills.
- Database: MySQL and MSSQL Server.

ACADEMIC QUALIFICATIONS

National Senior Certificate

Trichardt School for Christian Education

2011

HND Computer Sciences

CTI Education Group

2012-2013



REFERENCES

Name: ***Mr W. Willers***

Position: ***Software Developer***

Contact Details:

+27 13 755 3918

Name: ***Mr Barry Dewet***

Position: ***Principle, Trichardt School for Christian Education***

Contact Details:

+258 84 304 6338

Name: ***Prince Magagula***

Position: ***MLM Instructor***

Contact Details:

+27 83 306 8197



Version Log – CV Document

Version	Authors	Date	Reason For Change
1.0	Tejas Dwarkaram	21/02/2014	Revised parts of the CV based on client suggestions
2.0	Tejas Dwarkaram	28/02/2014	Changed format of the CV
2.1	Tejas Dwarkaram	07/03/2014	Changed Telephone number structuring
2.2	Tejas Dwarkaram	08/03/2014	Added images to the CV to add professionalism
2.2.1	Tejas Dwarkaram	10/03/2014	Spell Check performed



ToyToyerz

Design Report

Group 1:

Tejas Dwarkaram – H00182776

Nelio Lucas – H00182777

Ndumiso Mkhatshwa – H00182874

Khethiwe Ngwenya – H00182866

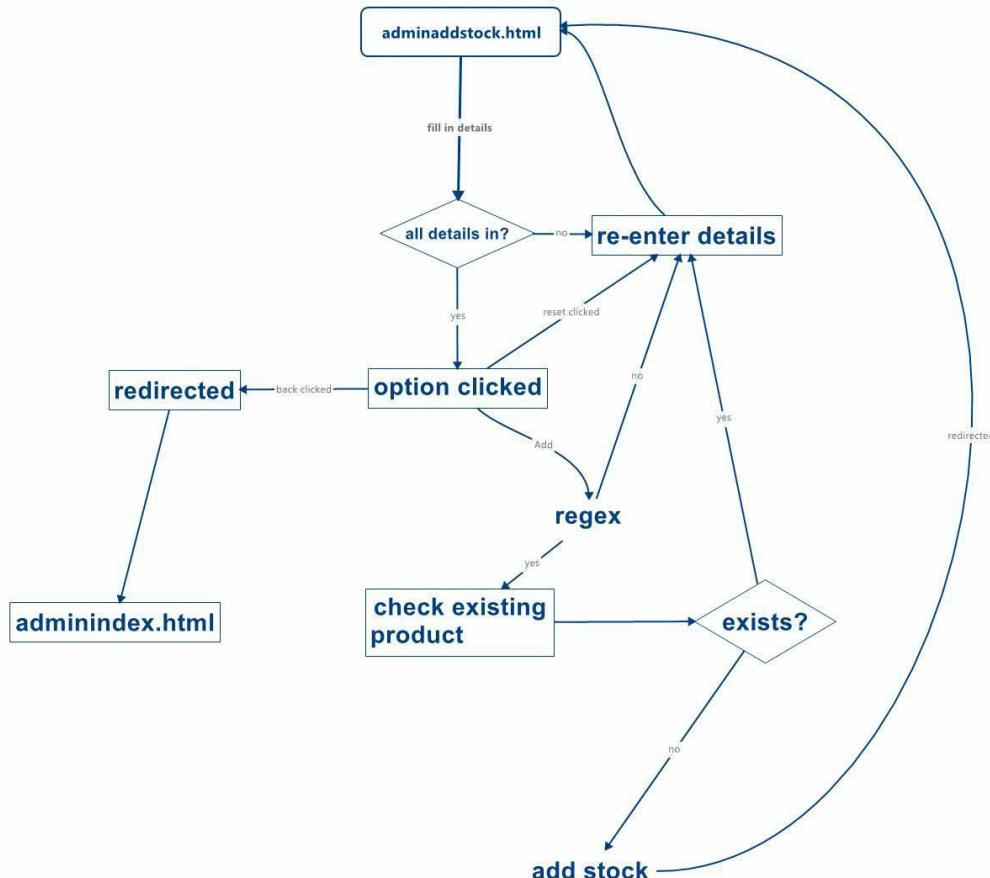
Sabelo Mabuza – Pending



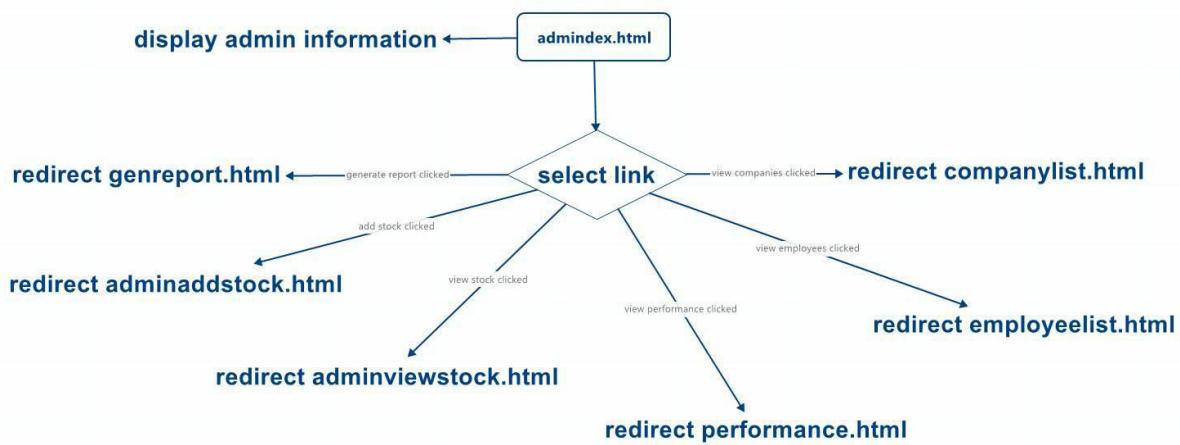
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Entity Relationship Diagram	20
Deployment Diagram	21

Data Flow Diagrams



Admin clicks on add stock link, admin fills in all the details for adding stock. If all the details are in and correct, the admin can choose to click the back button and be redirected to the admin index page if not then the admin should re-enter or correct details. after entering the product details , the system checks if the product already exists , if not then it adds the record to the system then redirects the admin to the admin stock page , but if the product does exist then the admin is prompted to re-enter details for a non-existing product .



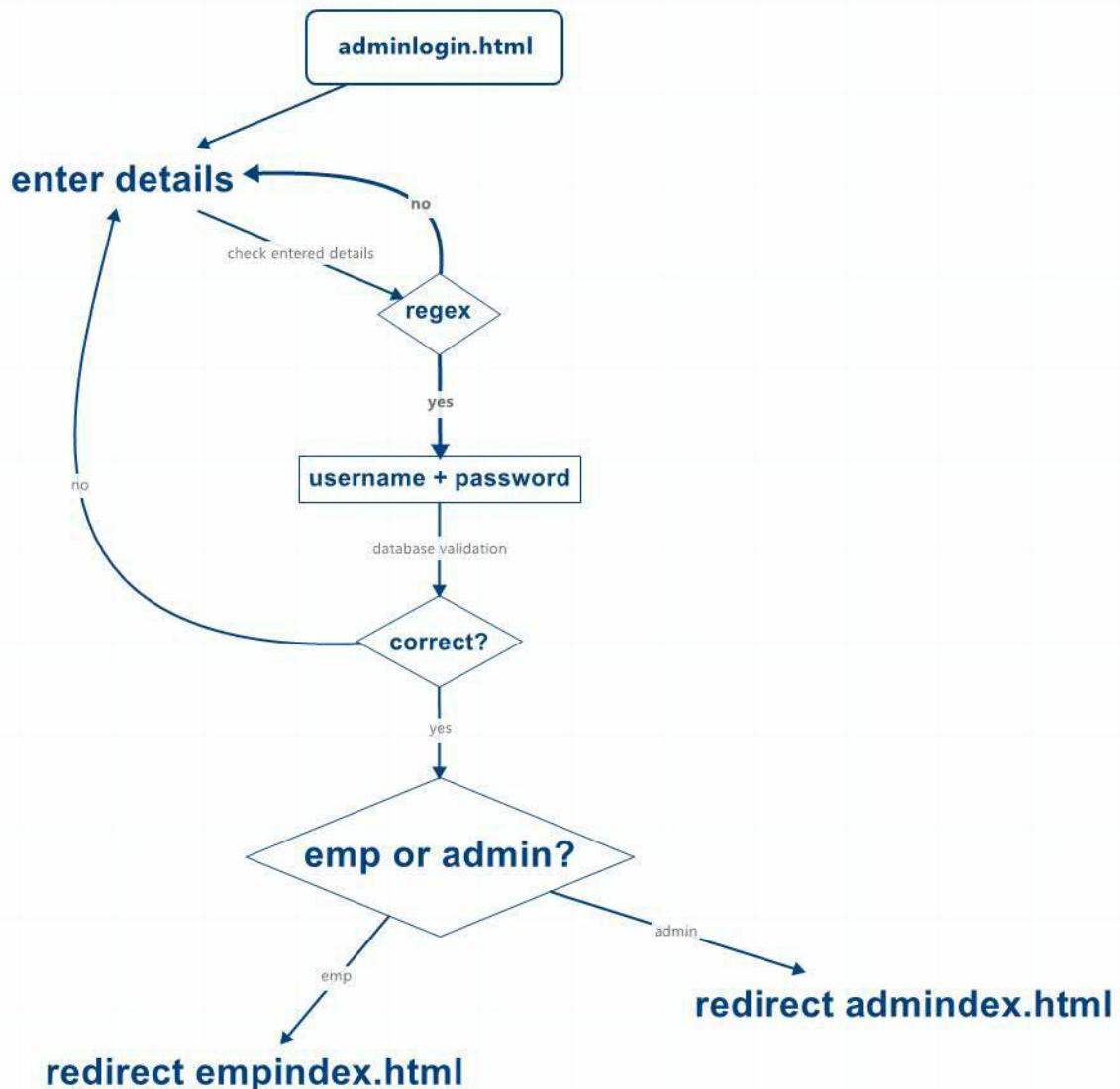
In the admin index page the admin has the choice of selecting 6 options or links. if the admin clicks generate report, the admin is redirected to the `genreport.html` page if the admin clicks the add stock link, the admin is redirected to the `adminaddstock.html` page, if the admin clicks the view stock link, the admin is redirected to the `adminviewstock.html` page, if the admin clicks the view performance button the admin is redirected to the `performance.html` page, if the admin clicks the view employees button, the admin is redirected to the `employelist.html` page.

admingenreports.html

choose criteria

generate report

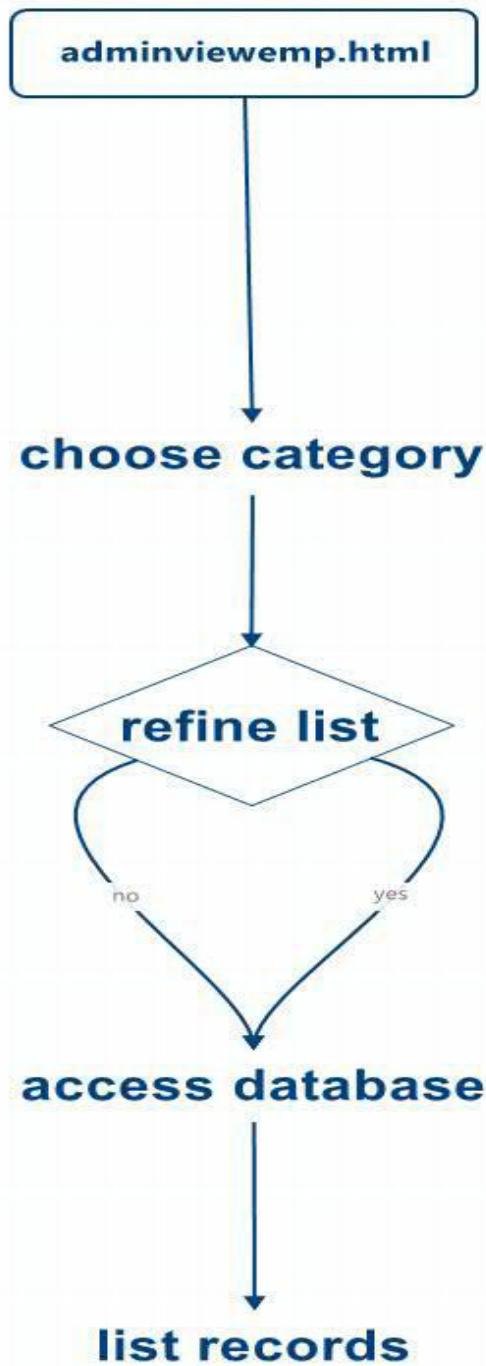
In admingenrereports.html page, the admin chooses his/her criteria and a report is generated based on that criteria.



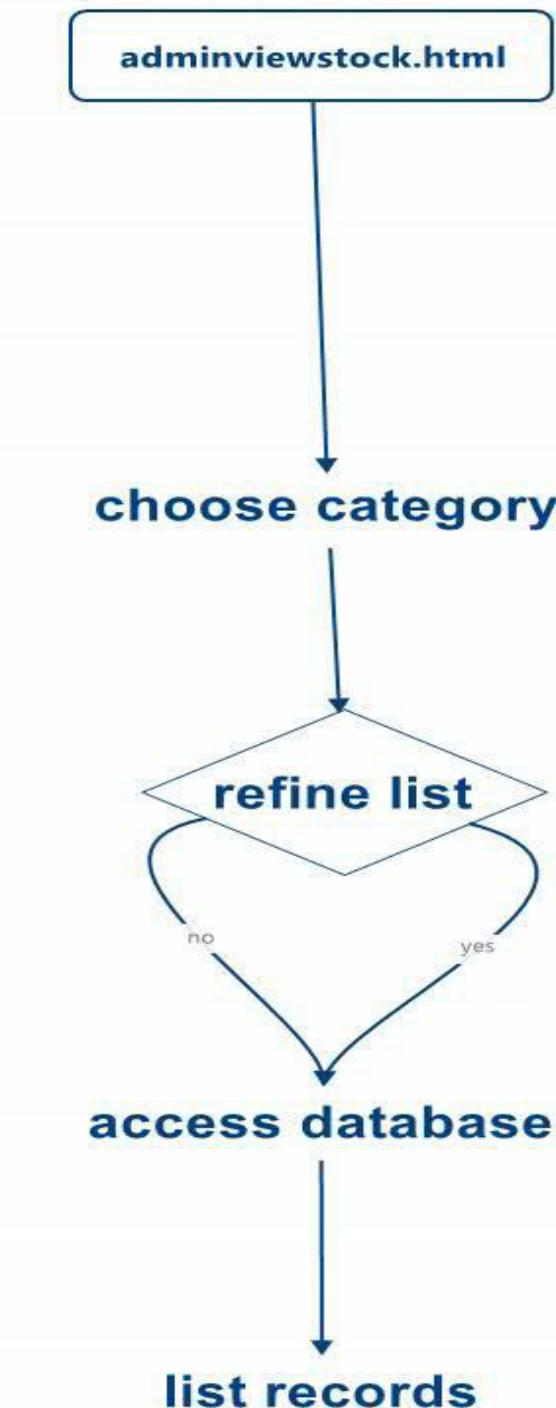
In the **adminlogin.html** page the user enters his/her login details, the system checks if the login details are valid. If not then the user is prompt to re-enter their login details, if so then the system checks the user's clearance level. If the clearance level is set to 1, then the user is identified as admin and is redirected to the **admindex.html** page, if the clearance level is set to 2, then the user is identified as employee and is redirected to the **empindex.html** page.



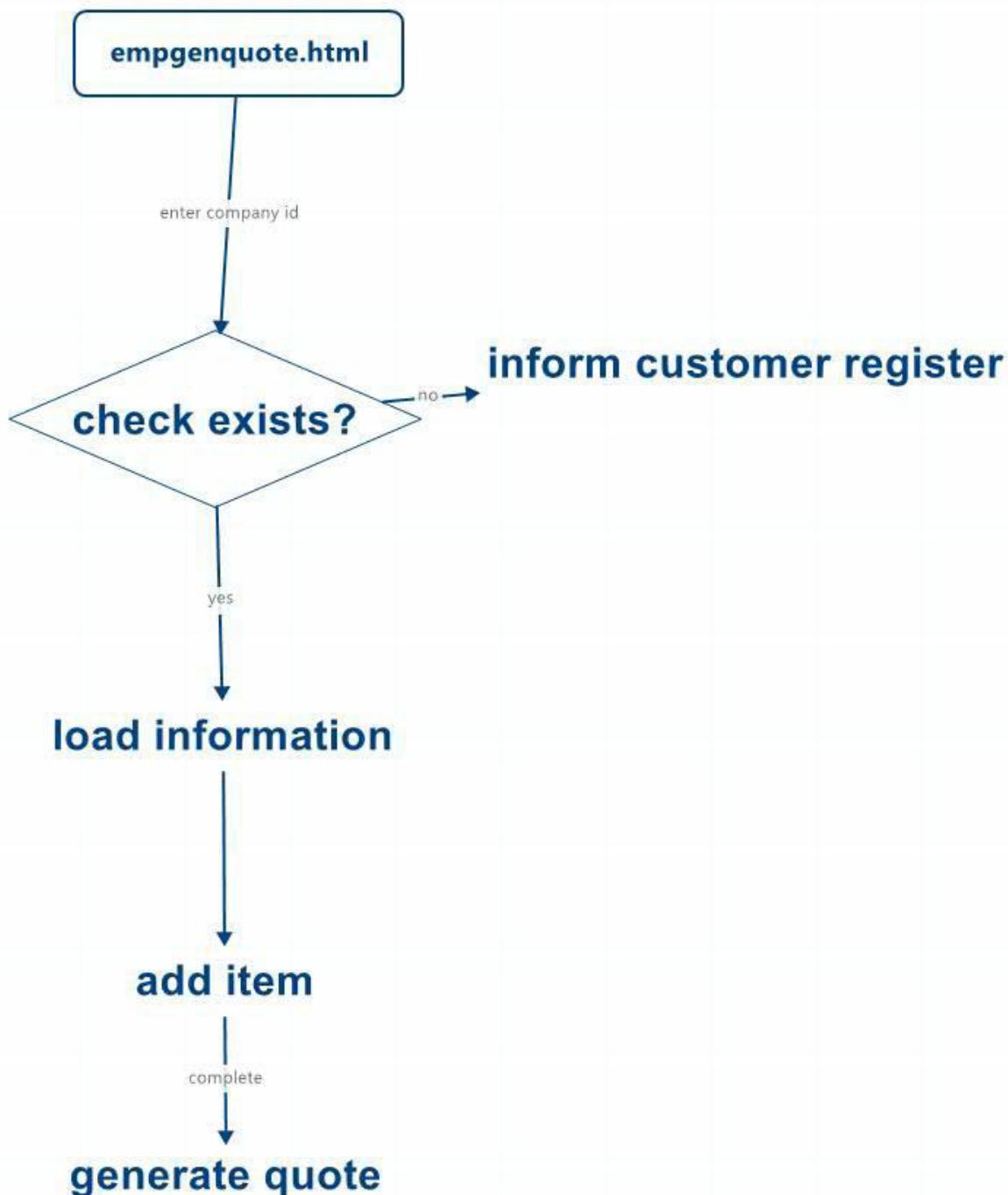
In the adminviewcomp.html page, the admin chooses a category of companies, the system then chooses to refine the list depending on the availability of records, if it does refine the list, it accesses the database and displays records, if not then it still accesses the database and displays records.



In the **adminviewemp.html** page, the admin chooses a category of employees, the system then chooses to refine the list depending on the availability of records, if it does refine the list, it accesses the database and displays records, if not then it still accesses the database and displays records

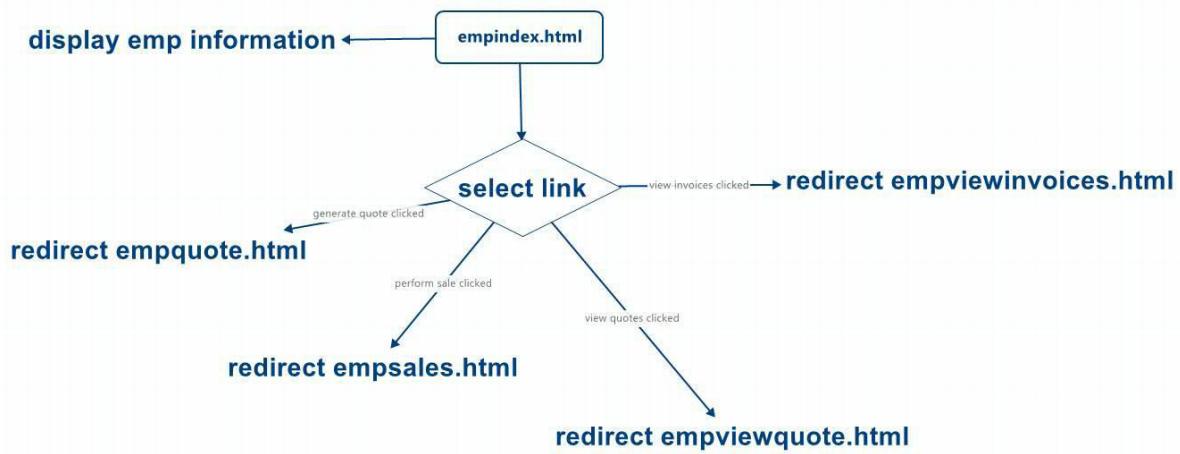


In the **adminviewstock.html** page, the admin chooses a category of stock, the system then chooses to refine the list depending on the availability of records, if it does refine the list, it accesses the database and displays records, if not then it still accesses the database and displays records.

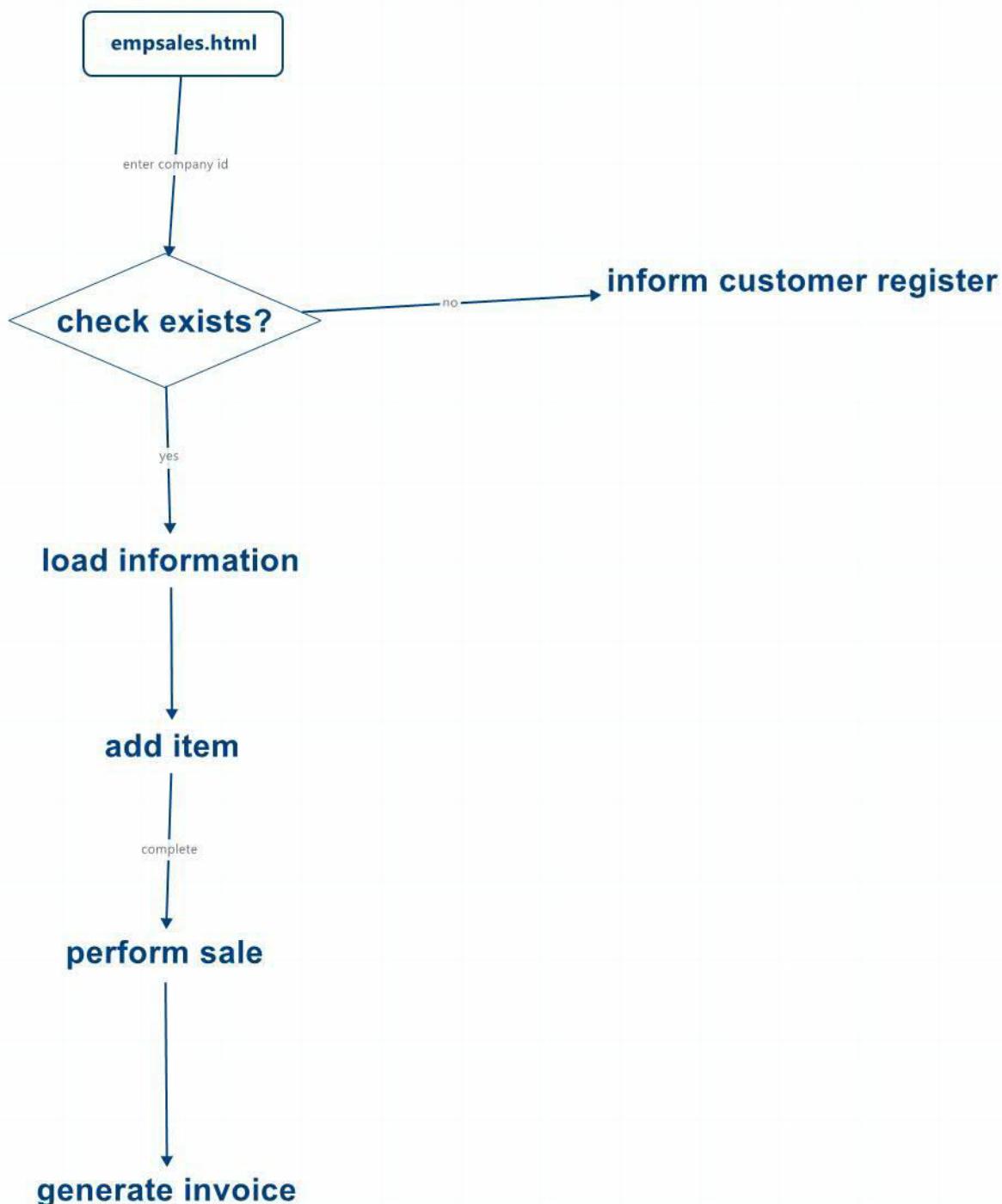


In the empgenquote.html page , the user enters the company id and the system checks if it exists , if not then it informs the customer register , if so then the system loads quote information , adds the item and generates the quote.

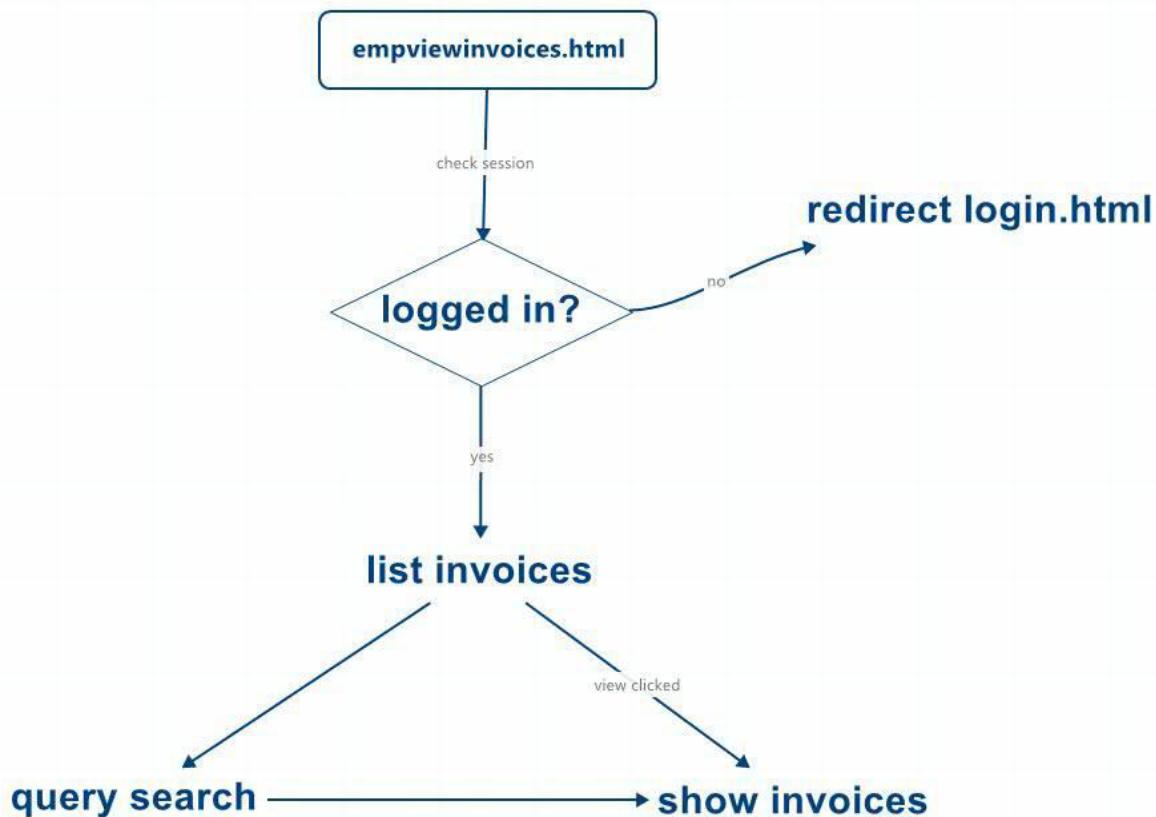
The empindex.html page, displays employee information but also contains a few links. if the generate quote button is clicked the user will be redirected to the empquote.html page, if the perform sale button is clicked, the user will be redirected to the empsales.html page, if the user clicks the view quotes button, the user will be redirected to the empviewquote.html page, if the user clicks the view invoices button then the user is redirected to the empviewinvoices.html page



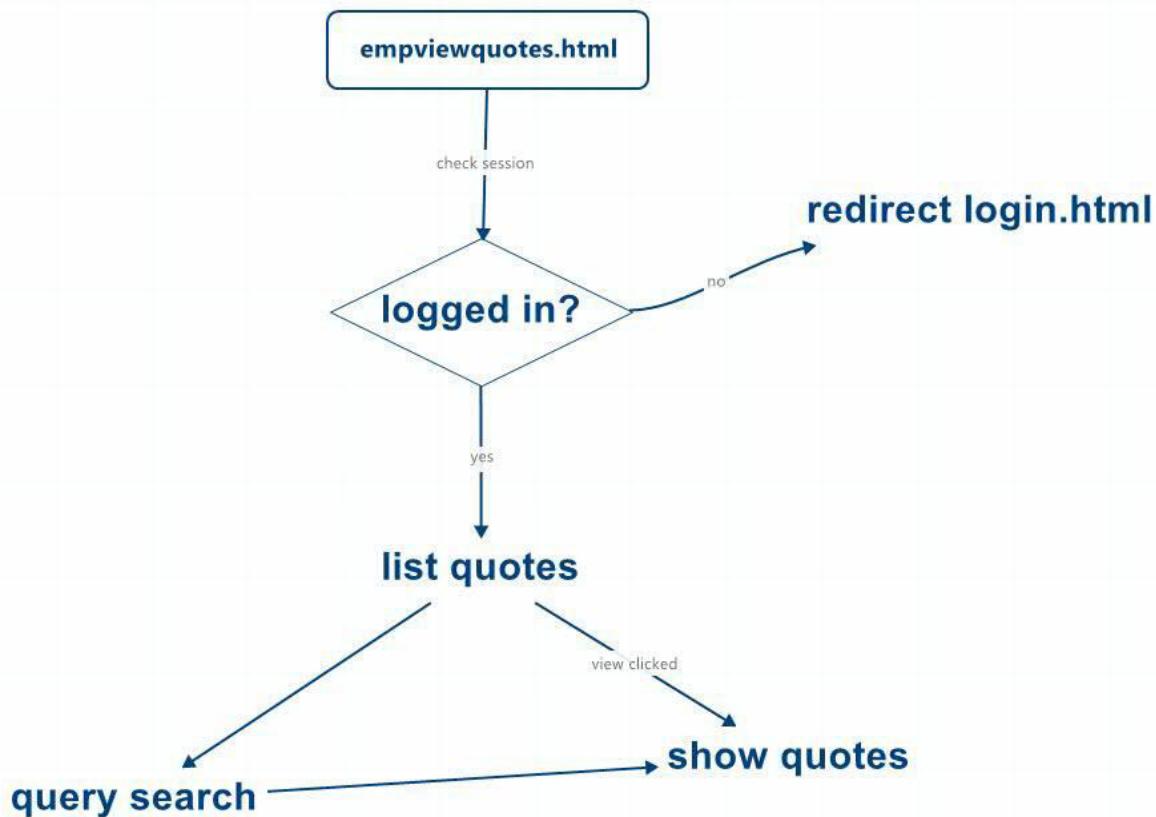
The empindex.html page, displays employee information but also contains a few links. if the generate quote button is clicked the user will be redirected to the empquote.html page, if the perform sale button is clicked, the user will be redirected to the empsales.html page, if the user clicks the view quotes button, the user will be redirected to the empviewquote.html page, if the user clicks the view invoices button then the user is redirected to the empviewinvoices.html page



In the empsales.html page , the user enters the company id and the system checks if it exists , if not then it informs the customer register , if so then the system loads invoice information , adds the item , performs the sale and generates the invoice.



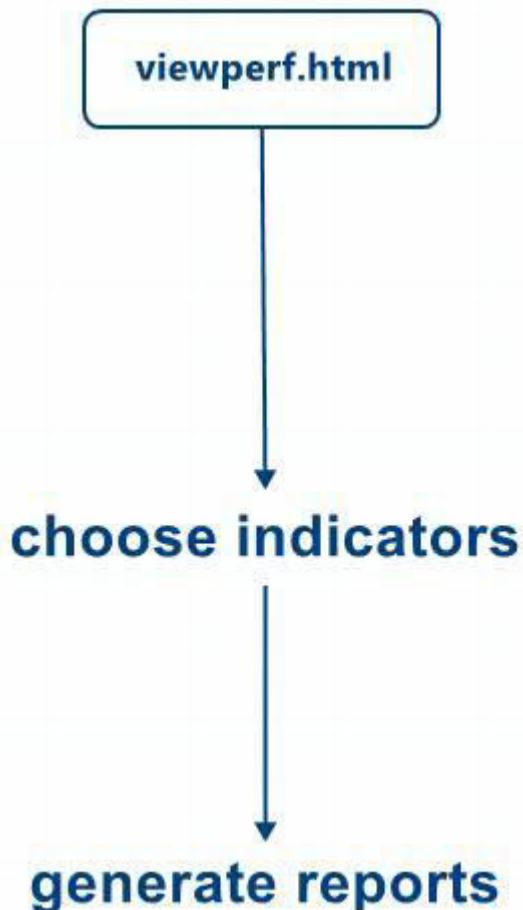
In the `empviewinvoices.html`, the system checks if the user is logged in, if not the user is redirected to the login page, if so a list of invoices is displayed, the user can then view any invoice he/she clicks and it will then be displayed or the user can filter the search and it will display a filtered list of invoices.



In the `empviewquotes.html`, the system checks if the user is logged in, if not the user is redirected to the login page, if so a list of quotes is displayed, the user can then view any quote he/she clicks and it will then be displayed or the user can filter the search and it will display a filtered list of quotes.

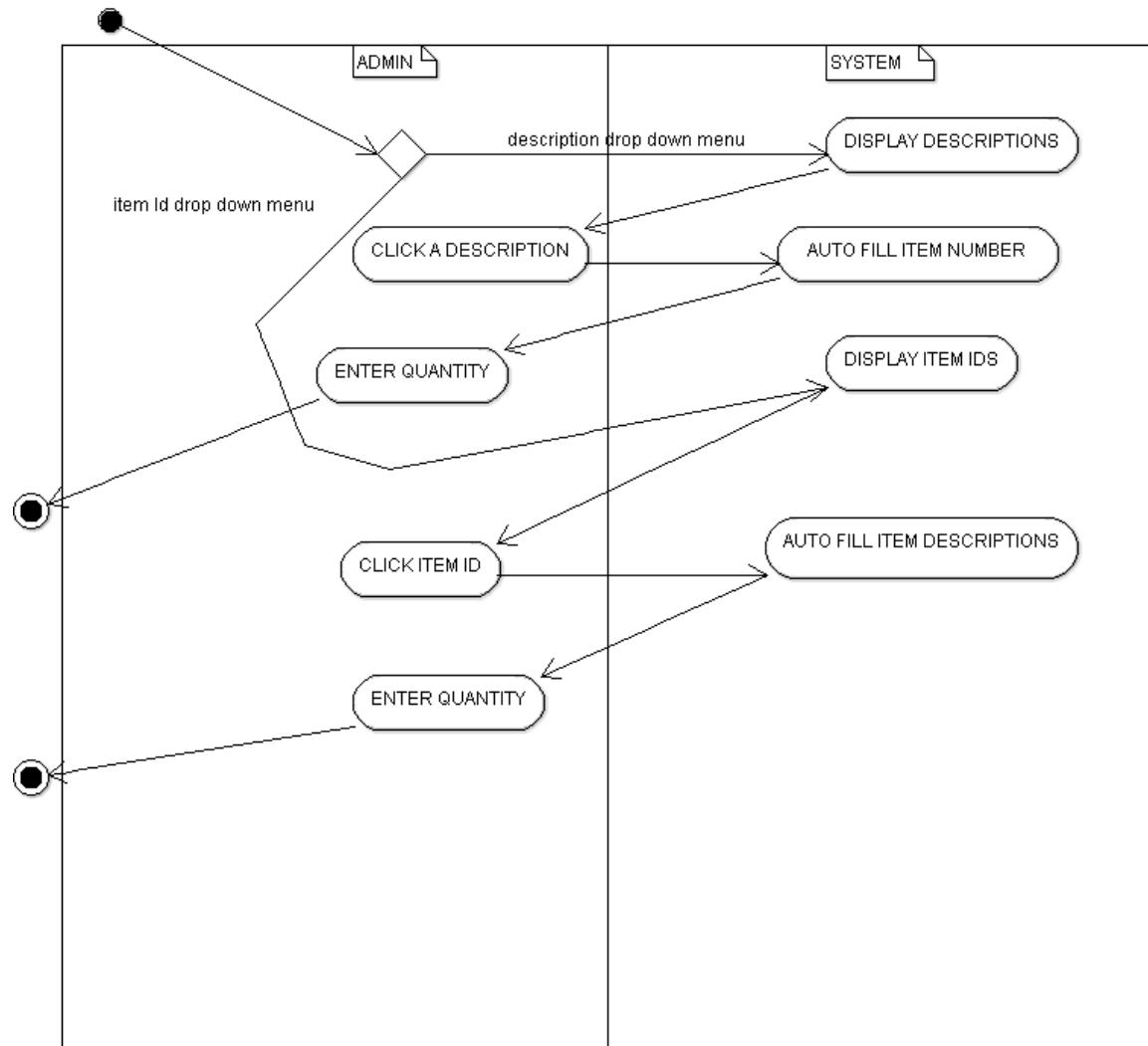


On the viewemp.html page, the admin has the right to view all of the employees in the organization. The admin has the choice to refine or filter the records that the admin wishes to view. Once these decisions are made, the database pulls these records and they are displayed to the admin

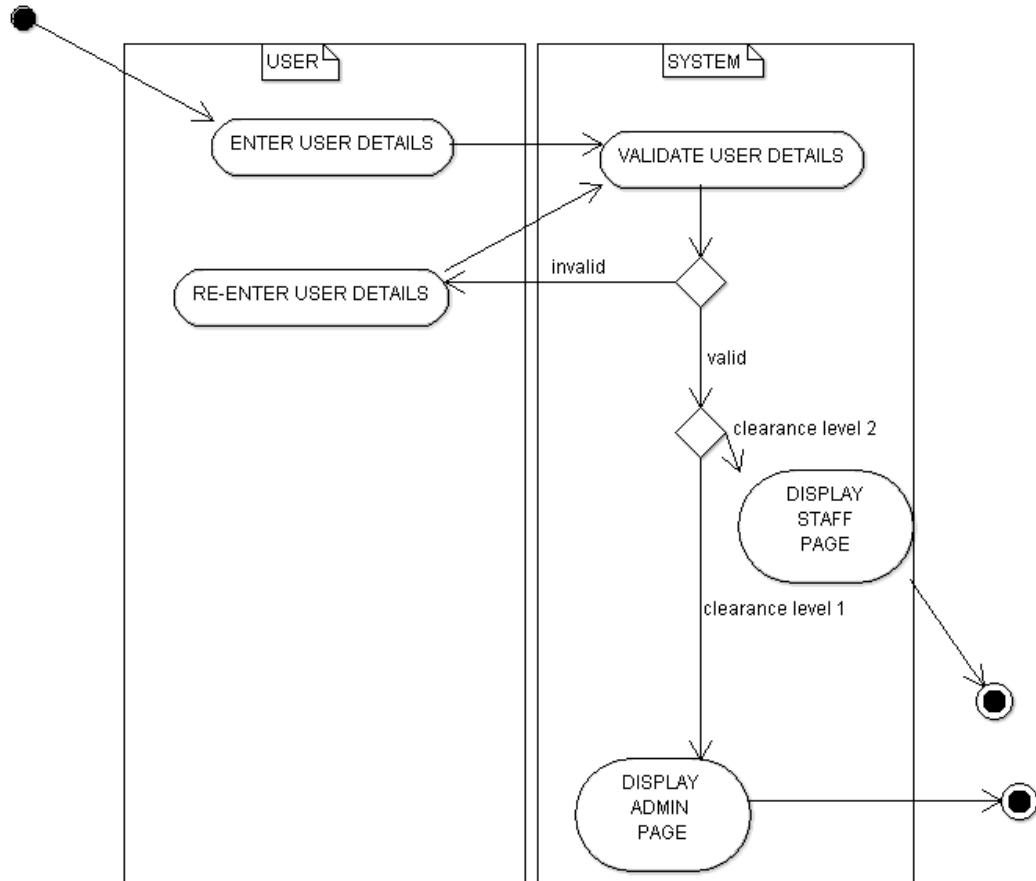


On the viewperf.html page, the admin is given the choice to choose the performance indicators that need to be displayed on the performance report. Once this is chosen, the report is generated and displayed to the admin

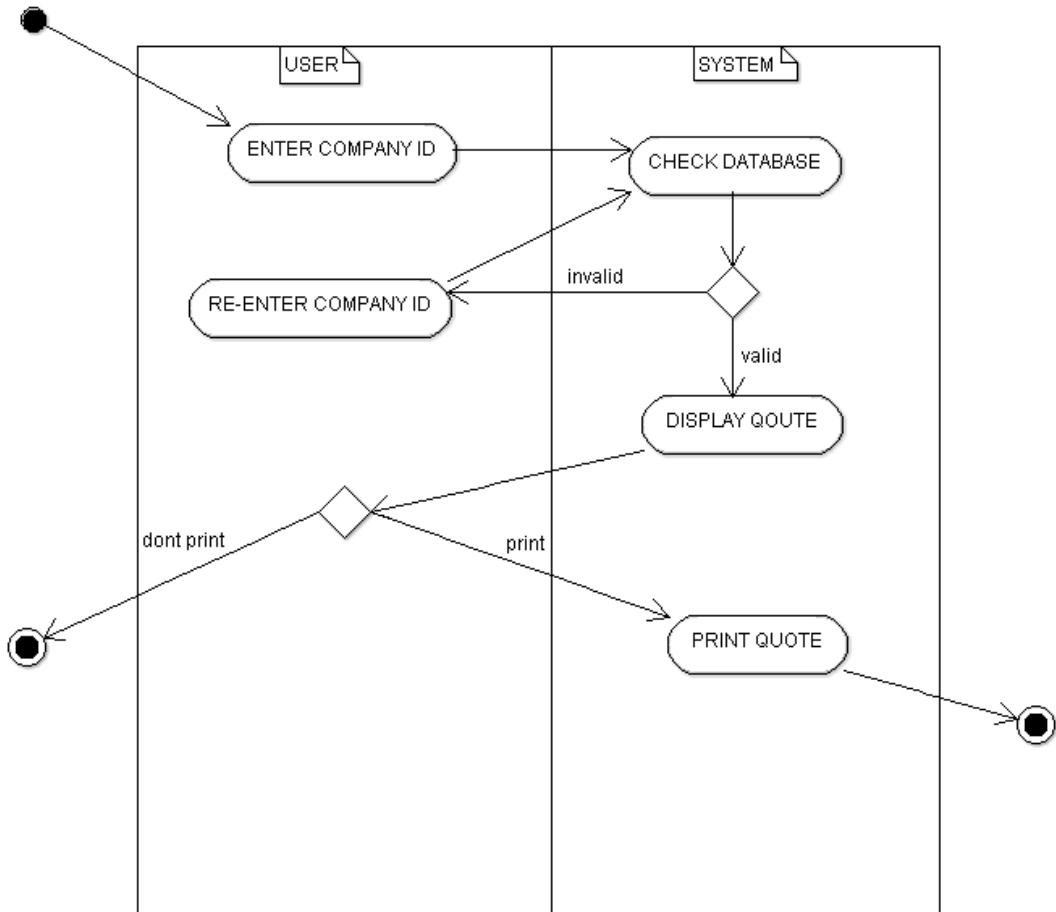
Activity Diagrams



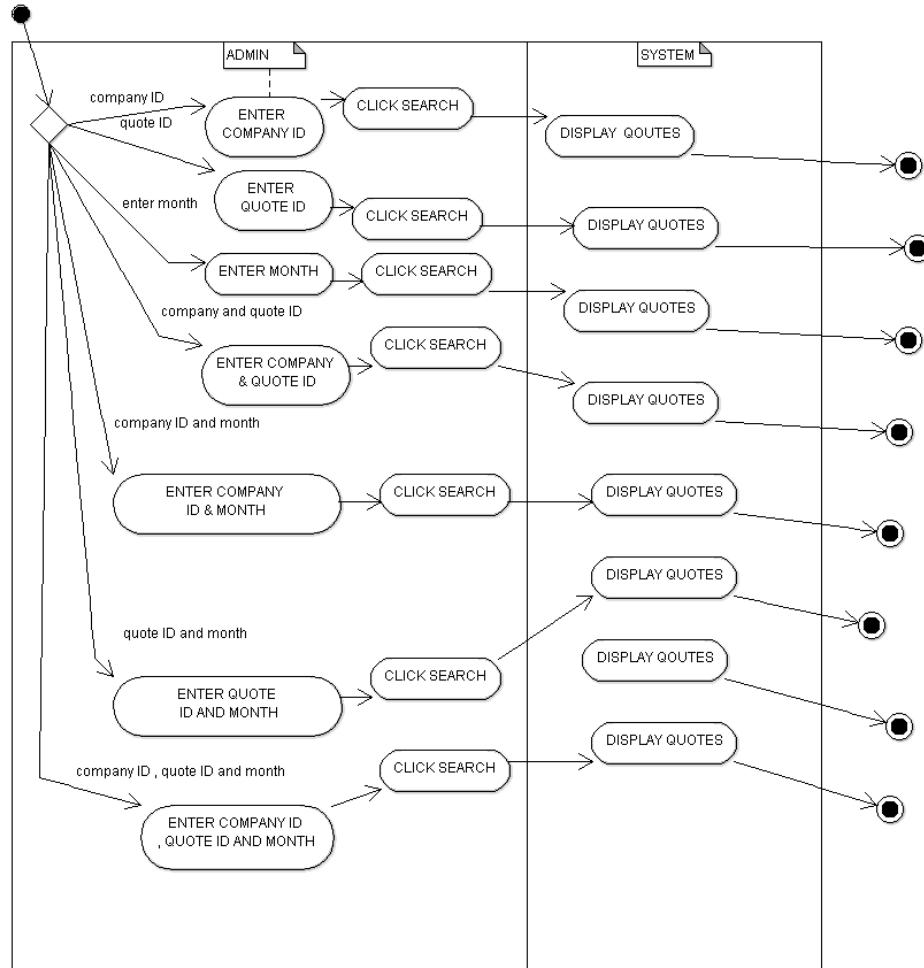
The admin can choose between searching for items using the description menu, or the item id menu. With either choice, the admin chooses either the description or item ID, once this is chosen, a quantity is added for the number of items



The user enters his login details. Once the details are entered the system validates the details. If invalid the user must re-enter their details, if valid, the system checks whether the user is a staff or admin based on their clearance level and displays the staff page or admin page respectively



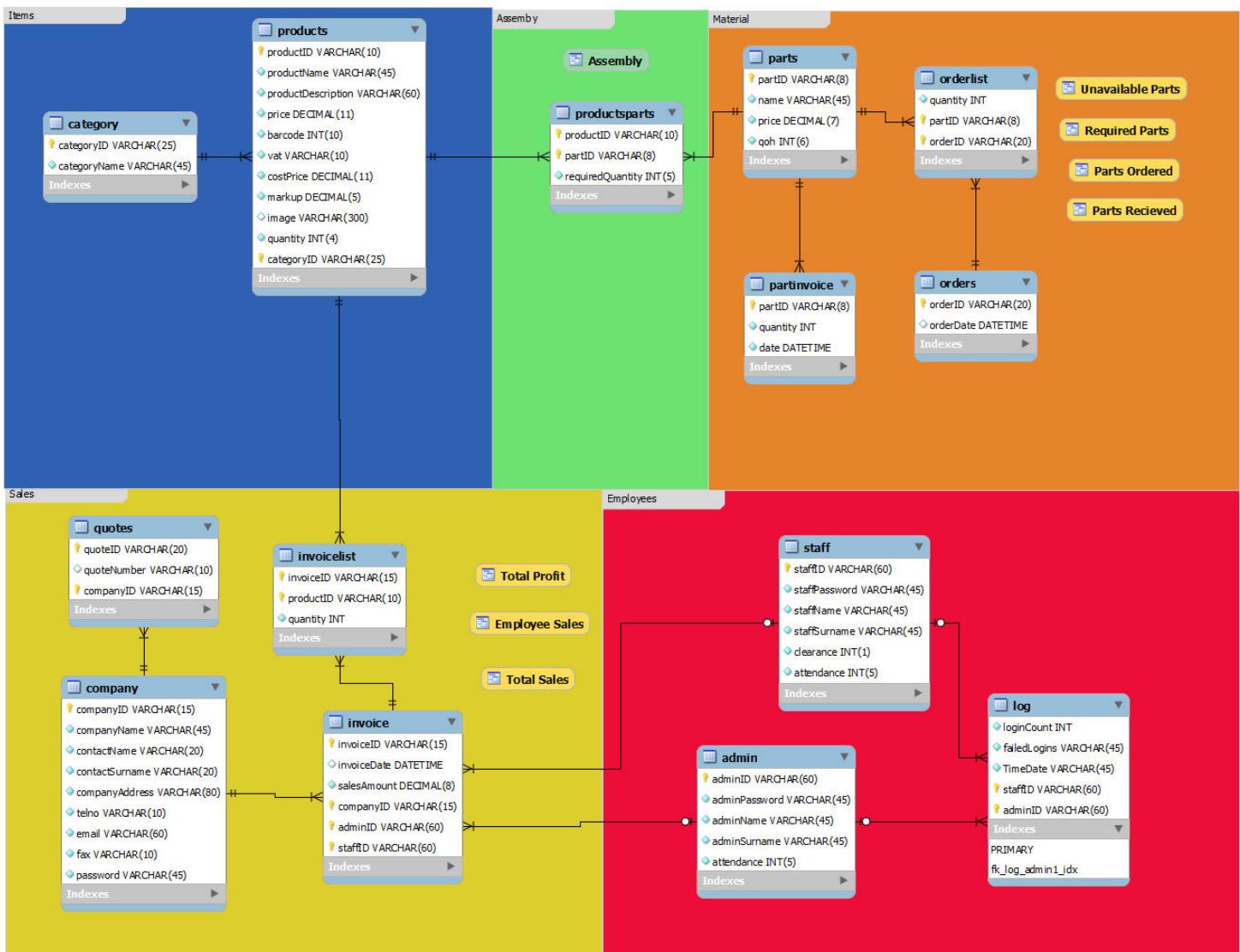
The user enters the company ID. The ID is checked against the database to check its existence. If it is valid the quote is displayed with the option to print. If the print option is chosen the system prints the quote for the user



The admin can choose to search for quotes using a number of search criteria. The search can be carried out by using a company ID, quote ID, or month of quote.



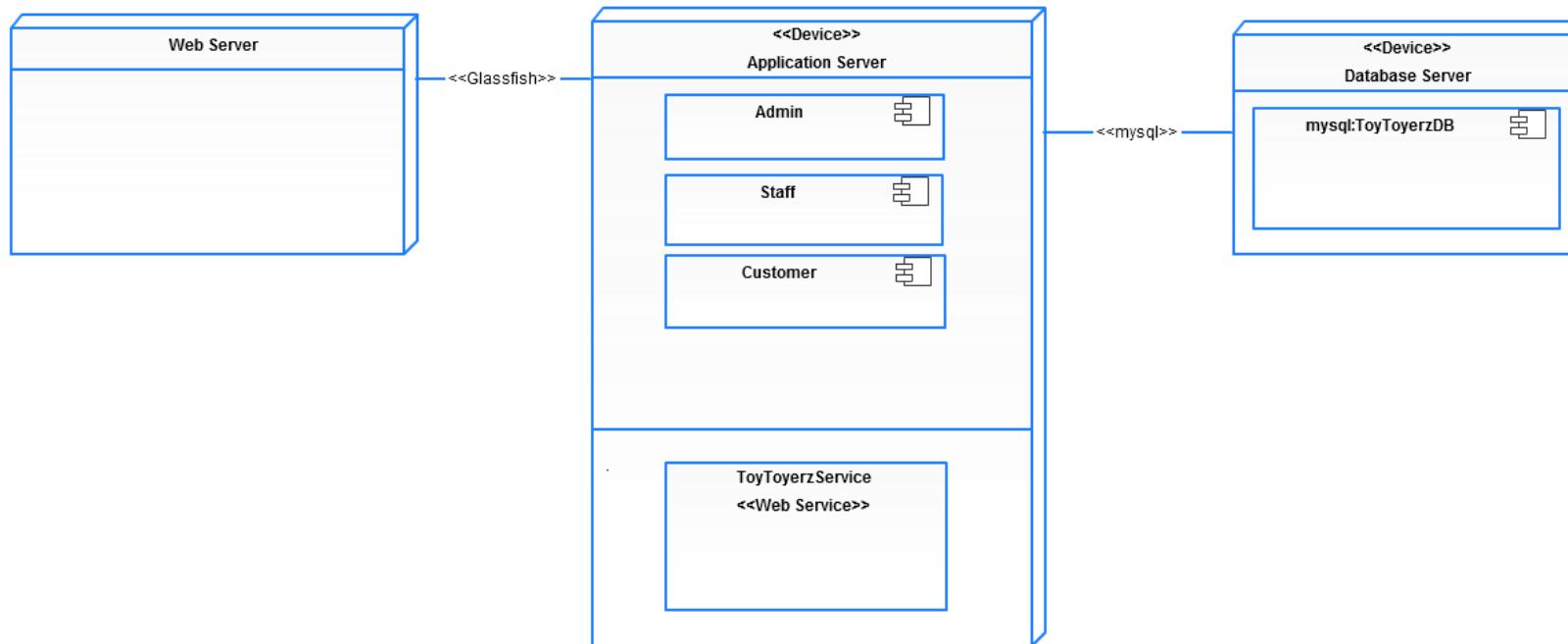
Entity Relationship Diagram





Deployment Diagram

Deployment Diagram For an Information Management System



The database is managed through a MySQL Server, which connects to the Servlet within the Application. The Application is hosted on an Open Source web server program called Glassfish Server. The Application communicates through the Web Server to the Client, and accesses the Database when required.



Version Log – Designs Document

Version	Authors	Date	Reason For Change
1.0	Tejas Dwarkaram	20/02/2014	Included new Data Flow Diagrams for added functionality
1.1	Tejas Dwarkaram	24/02/2014	Updated ERD to Version 2 (Significant Table additions)
1.2	Tejas Dwarkaram	28/02/2014	Included Use Case Diagrams for current system functionality
1.3	Tejas Dwarkaram	01/03/2014	Integrated Deployment Diagram into the documentation
1.4	Tejas Dwarkaram	02/03/2014	Revised Documentation and updated ERD to Version 3
1.4.1	Tejas Dwarkaram	03/03/2014	Performed Spell Check
2.1	Tejas Dwarkaram	05/06/2014	Revised ERD to Version 4 (Complete table additions) as well as added new Data Flow Diagrams
2.2	Tejas Dwarkaram	04/09/2014	Replaced ERD with Version 5, including new tables for easier Invoice and Quote Management
2.2.1	Tejas Dwarkaram	05/09/2014	Spell Check Performed
2.3	Tejas Dwarkaram	09/09/2014	Removed some Data Flow Diagrams based on unnecessary functionality



ToyToyerz

Implementation Document

Group 1:

Tejas Dwarkaram – H00182776

Nelio Lucas – H00182777

Ndumiso Mkhatshwa – H00182874

Khethiwe Ngwenya – H00182866

Sabelo Mabuza – Pending



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Implementation Documentation	2
Implementation	2
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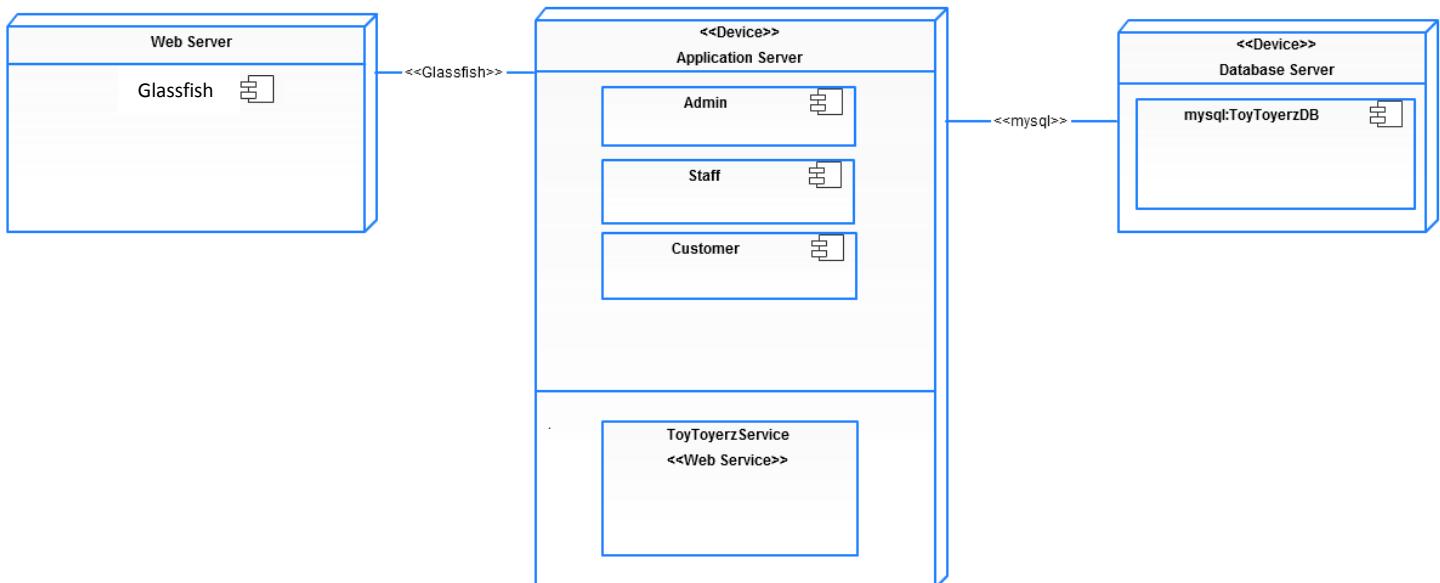


Implementation Documentation

Implementation

The implementation of the system will be carried out by utilizing the Glassfish WebServer. The web application (ToyToyerz Inventory Management System) will be hosted on this WebServer. The database management system that we have utilized is the MySQL Community Edition. This is an openSource alternative to MSSQL Server that was initially being considered. The database will communicate with the webserver. This is better demonstrated by viewing the deployment diagram that has been created.

Deployment Diagram For an Information Management System





Progress

Progress made till date:

- Initial Design of GUI's completed
- Proof of concept developed and accepted
- Web Service created
- Successfully linked Service to Website
- Completed UML Diagrams, Activity Diagrams, ERD, Deployment Diagrams
- Evaluations have been established
- Client Side Functionality Completed
- Admin Side Functionality Nearly completed
- Version Control system has been successfully implemented
- All changes and/or modifications to documentation has been recorded

Along with progress made on those aspects, a number of issues arose up until this point have arisen and have been documented in the table below

Topic completed	What happened	Problems encountered	Solutions
Coding Language Change	Team members that stated certain skills were unable to perform them effectively	It was decided upon by the team and client that C# will be used in conjunction with Java to create the system, but relevant team members were not able to develop in C#	After approval from the client, it was decided that the entire system would be developed using Java
Database design	Attributes for the tables were created , and from there normalized into entities which then became the tables for the database	Due to the multiple tables, the designing of the flow of data from table to table and relationships became complex.	Organized tables in such a way that the relationships could be seen better making the ERD less "meshy"
GUI design and coding	An initial website interface was designed and coded	There was a difficulty aligning the tabs next to each other	Researched css/div in order to solve this issue
Forward engineering the database	Deriving tables from the ERD	The tables failed to be created because Workbench could not connect to the database	Turned on the server and changed port numbers to the insecure 3306 to the secure 3307
GUI Design	Design of Website was not accepted fully by the client	Numerous new designs were developed, and taken	The client accepted a design and implementation began

		to client for authorization	
Database design	Database was restructured and new tables (invoiceList , parts , orderList) were created and some removed (sales , report and stock)	Multiple table creation errors due to primary key conflicts and data insertion errors	Recreating the tables and inserting data into parent entities first
Reporting Issues	Reporting mechanism was not fully understood, and we were unable to produce the required components	Netbeans did not allow for the desired plugin to be used in order for our reports to be created	Redownloaded the plugin package, found tutorials online, and managed to get the component to function effectively
Password not secure	Our Project Manager found that our password field in our database was not properly secured	Any individual that has access to the database would have had access to all of the users password due to no encryption method being implemented	Research was done on various encryption mechanisms, and MD5 was chosen as the appropriate encryption system for this particular scenario
Logo Design	The Initial Logo design for the clients company had issues	The logo that was decided upon initially required an extended amount of time to successfully animate and render correctly	The team approached the client with a new design for the logo and it was accepted by the client
Functionality of the system	It was realized that the functionality that was being focused on was not the main requirement of the system	The client side became the main focus of the developers, instead of the administrative side	Less focus was placed on client side activities and rather directed at administrative functionality
Layout of Design	The layout of the website was not accepted by the client	The client did not want the traditional banner placing website layout	The website was redesigned and the layout was changed and the changes were accepted by the client



Current Performance Measurements

		Name	Duration	Start	Finish	Predecessors	Resource Names	F	S
1	✓	Deliverable 1	46 days	2014/02/10 5:00 PM	2014/03/26 11:00 PM				
2	✓	Initial User Interface Design	2 days	2014/02/10 5:00 PM	2014/02/11 11:00 PM		Nelio;Tejas		
3	✓	Initial ERD Diagram	7 days	2014/02/12 8:00 AM	2014/02/17 1:00 PM		Nelio		
4	✓	Initial Logo Diagram	2 days	2014/02/17 8:00 AM	2014/02/17 5:00 PM		Nelio;Tejas		
5	✓	Design User Interfaces	3 days	2014/02/18 8:00 AM	2014/02/19 1:00 PM	2	Nelio;Tejas		
6	✓	Design ERD for Database	3 days	2014/02/20 12:00 PM	2014/02/21 5:00 PM	3	Nelio;Tejas		
7	✓	Design LOGO for Client Company	3.5 days	2014/02/25 8:00 AM	2014/02/26 3:00 PM	4	Nelio;Tejas		
8	✓	Deliverable 1 Documentation	20 days	2014/02/28 8:00 AM	2014/03/26 11:00 PM	2;3;4;5;6;7	Nelio;Tejas		
9	✓	Deliverable 2	29 days	2014/03/14 5:00 PM	2014/04/23 11:00 PM				
10	✓	Code Database	4 days	2014/03/14 5:00 PM	2014/03/19 11:00 PM	6	Nelio		
11	✓	Populate Database	3 days	2014/03/18 5:00 PM	2014/03/20 11:00 PM	10	Nelio		
12	✓	Code User Interfaces	5 days	2014/03/20 5:00 PM	2014/03/26 11:00 PM	5	Nelio[75%];Tejas[25%]		
13	✓	Code Admin Side	5 days	2014/03/25 5:00 PM	2014/03/31 11:00 PM	8	Tejas		
14	✓	Code Client Side	5 days	2014/03/28 5:00 PM	2014/04/03 11:00 PM	8	Tejas		
15	✓	Connect Database to Web Appli...	3 days	2014/04/02 5:00 PM	2014/04/04 11:00 PM	13;14	Tejas		
16	✓	User Login(Client Side)	4 days	2014/04/04 5:00 PM	2014/04/09 11:00 PM	14	Tejas		
17	✓	User Login/Admin Side)	4 days	2014/04/08 5:00 PM	2014/04/11 11:00 PM	13	Tejas		
18	✓	Registration(Client Side)	2 days	2014/04/10 5:00 PM	2014/04/11 11:00 PM	14	Tejas		
19	✓	Product Lists(Client Side)	2 days	2014/04/11 5:00 PM	2014/04/14 11:00 PM	14	Tejas		
20	✓	Database Implemented	1 day	2014/04/14 5:00 PM	2014/04/14 11:00 PM	10	Tejas		
21	✓	Connect Admin,Client to Servlets	1 day	2014/04/15 5:00 PM	2014/04/15 11:00 PM	13;14	Tejas		
22	✓	Security Clearance Implemented(...	1 day	2014/04/17 5:00 PM	2014/04/17 11:00 PM	13	Tejas		
23	✓	Deliverable 2 Documentation	4 days	2014/04/18 5:00 PM	2014/04/23 11:00 PM	10;11;12;13;14;15;16;17;1...	Nelio;Tejas		
24	✓	Deliverable 3	113 days	2014/04/23 5:00 PM	2014/09/26 11:00 PM				
25	✓	Reporting Function Implemented	80 days	2014/04/23 5:00 PM	2014/07/15 11:00 PM	13	Tejas		
26	✓	Cart Function Implemented	10 days	2014/06/05 5:00 PM	2014/06/18 11:00 PM	14	Tejas		
27	✓	Performance Charts Implemented...	60 days	2014/06/13 5:00 PM	2014/09/04 11:00 PM	13	Tejas		
28	✓	Unit Testing	3 days	2014/07/25 5:00 PM	2014/07/29 11:00 PM	13;14			
29	✓	Performance Testing	3 days	2014/07/29 5:00 PM	2014/07/31 11:00 PM	13;14			
30	✓	Stress Testing	4 days	2014/08/01 5:00 PM	2014/08/06 11:00 PM	13;14			
31	✓	Usability Testing	6 days	2014/08/07 5:00 PM	2014/08/14 11:00 PM	13;14			
32	✓	Acceptance Testing	3 days	2014/08/15 5:00 PM	2014/08/19 11:00 PM	13;14			
33	✓	Deliverable 3 Documentation	29 days	2014/08/19 5:00 PM	2014/09/26 11:00 PM	23	Nelio;Tejas		
34	✓	Deliverable 4	11 days	2014/09/26 5:00 PM	2014/10/10 11:00 PM				



Version Log – Implementation Document

Version	Authors	Date	Reason For Change
V1.1	Tejas Dwarkaram	15/05/2014	Alteration made to implementation table due to programming language change
V1.2	Nelio Lucas	19/05/2014	Alteration made to implementation table due to Database design issue
V1.3	Nelio Lucas/Tejas Dwarkaram	20/05/2014	Alteration made to implementation table due to difficulties arising with website design
V1.4	Nelio Lucas	23/05/2014	Alteration made to implementation table for Database connectivity issue
V2.0	Tejas Dwarkaram	02/06/2014	Alteration made to implementation table due to complete User Interface change
V2.1	Tejas Dwarkaram	09/06/2014	Alteration made to implementation table due to issues arising within Netbeans (Plugin Issues)
V2.2	Nelio Lucas	10/06/2014	Alteration made to implementation table for changes made to the Database (Password Security Issue)
V2.3	Tejas Dwarkaram	18/06/2014	Alteration made to implementation table due to layout changes made to the user interface
V2.3.1	Tejas Dwarkaram	16/09/2014	Complete Document Spell Check carried out
V2.3.2	Tejas Dwarkaram	23/09/2014	Final Spell Check performed
V3.0	Tejas Dwarkaram	24/09/2014	Changed Progress Diagram
V3.1	Tejas Dwarkaram	29/09/2014	Included Deployment Diagram with Implementation structure
V3.2	Tejas Dwarkaram	10/10/2014	Updated Performance Measurement table, with completed aspects
V3.2.1	Tejas Dwarkaram	14/10/2014	Final spell check performed



ToyToyerz

Product Evaluation

Group 1:

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Sabelo Mabuza – Pending

13/04/2014





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Evaluation planning

There are six types of testing provided for ToyToyerz Inventory Management System website development.

Unit testing

Unit Testing comprises of the Developer individually testing each unit of functionality as it is completed, in order to avoid issues once the system has been completed, as there are more than one aspects that need to be looked at when completing the system, and including all of the functionality as required by the system.

Conductors of Unit testing:

- Tejas Dwarkaram

Functional testing

During functional testing, the development team will test each system function individually and assure that the functions perform as they should and meet the specified requirements defined by our client.

We going to:

1. Refer to the functional requirements to identify the functions of our system
2. Devise input data for testing each system function
3. Determine the expected output each function
4. Begin the execution of the testing
5. Compare the expected data against the actual data
6. Verify if the function works as it is required to

System testing

During system testing the programmers of the group are going to conduct a complete system test. This entails testing the interaction between the webserver and database by monitoring the activities that occur between the database and webserver. So basically monitoring the system's response time between the customer side, webserver and database and monitoring packet flow.



Performance testing

During performance testing the development team will, conduct general testing to determine how responsive the system is and how well it works under stress (work load), so in other words checking how many clients the webserver can handle and still perform at the required rate.

The types of testing that we are going to perform that falls under performance testing is:

- **Stress testing**
- **Load testing**

During stress testing we are going to test the efficiency of the system, so basically looking at aspects such as the systems flexibility (robustness). The tool we intend on using for stress testing is

- Apache JMeter

Conductors of stress testing

- Tejas Dwarkaram

During load testing (otherwise known as endurance testing) the programmers of the group will test the system under abnormal conditions to see how the system behaves under regular and extreme load conditions. The tool we are going to use for load testing is

- LoadUI

Conductors of load testing

- Tejas Dwarkaram

Usability testing

During usability testing, we are going to call in an external group of people to test and evaluate the system. So in other words we are going to be doing **beta testing**.

Conducts of beta testing:

- Brandon Rossouw
- Brian Rossouw
- Roland Presher
- Minal Dwarkaram



Acceptance Testing

Acceptance Testing involves the process of the development team, of the system, approaching the client (ToyToyerz) and demonstrating the completed product. By doing this we can deduce whether or not the final system is in accordance to what was required by the client, as well as if it meets all of the specifications along with containing the correct features and looks that were requested.

Testing Results

The results for all of the above mentioned tests, will be provided on the disc that accompanies the documentation. The results have been tested, and verified to be accurate to the honest ability of the development team.



Error Tables

Error code	Error description	Error control message
Login_userblank_01	username field is blank	Please enter your user name
Login_passblank_02	Password field is blank	Please enter your password
Login_passuserblank_03	Username and password field is blank	Please enter your username and password
Login_userpassInvalid_04	Username or password is incorrect	Your username or password is incorrect , please enter the correct username or password
Reg_companynameblank_01	Company name field is blank	Please enter company name
Reg_contactnameblank_02	Contact name field is blank	Please enter contact name
Reg_contactsurnameblank_03	Contact surname field is blank	Please enter contact surname
Reg_companyaddrblank_04	Company address field is blank	Please enter company address
Reg_tellnoblank_05	Telephone field is blank	Please enter telephone
Reg_emailblank_06	Email field is empty	Please enter email
Reg_faxblank_07	Fax field is empty	Please enter fax number
Reg_checkbox_08	Terms and conditions check box has not been checked	Please check on the terms and conditions check box to proceed
Cart_add_01	Out of stock	This item cannot be added , it is out of stock
Cart_no_item_selected_02	No item selected	No item was selected , please select an item
Reg_companyNameformat_09	Company name field is too long	Company name is too long Please reenter company name
Reg_contactNameformat_10	Contact name field is too long	Contact name is too long Please reenter contact name
Reg_contactsurNameformat_11	Contact surname field is too long	Contact surname is too long Please reenter contact surname
Reg_companyAddrformat_12	Company address field is too long	Company address is too long Please reenter company address



Reg_tellnoformat_13	Telephone field is too long	Telephone number is incorrect Please reenter telephone (eg: 123 456 123)
Reg_emailformat_14	Email field is incorrect	Email format is incorrect , Please reenter email (e.g: john@gmail.com)
Reg_faxformat_15	Fax field is incorrect	Fax number format is incorrect , Please reenter fax number (e.g: 21 349 340 34)
Reg_checkbox_16	Terms and conditions check box has not been checked	Please check on the terms and conditions check box to proceed
Admin_quoteMake_no_companyId_01	No company ID entered	Please enter a company ID
Admin_quotesView_no_companyId_02	No company ID entered	Please enter a company ID
Admin_quotesView_no_quotId_03	No quote ID entered	Please enter a quote ID
Admin_quotesView_noexist_quotId_23	Quote ID does not exist	The quote ID that you entered does not exist
Admin_quoteView_no_month_04	No month entered	Please enter a month
Admin_addproducts_no_profectId_05	No product ID entered	Please enter product ID
Admin_addproducts_no_productname_06	No product Name entered	Please enter product name
Admin_addproducts_no_productdescription_06	No product Description entered	Please enter product description
Admin_addproducts_no_price_07	No price entered	Please enter a price
Admin_addproducts_no_barcode_08	No barcode entered	Please enter the barcode
Admin_addproducts_no_vat_09	No vat entered	Please enter vat amount
Admin_addproducts_no_costPrice_10	No cost price entered	Please enter the cost price
Admin_addproducts_no_markup_11	No markup price entered	Please enter a mark price
Admin_addproducts_no_image_12	No image selected	Please choose an image
Admin_addproducts_no_quanitity_13	No Quantity entered	Please enter the quantity
Admin_addproducts_no_category_14	No category entered	Please choose a category
Admin_updateorder_no_orderid_15	No order ID entered	Please enter order ID
Admin_updateorder_no_quantity_16	No quantity entered	Please enter the quantity
Admin_updateorder_no_partid_17	No part ID entered	Please enter the part ID
Admin_updateorder_no_partname_18	No part name entered	Please enter part name



Admin_removeorder_no_orderID_19	No order ID entered	Please enter an order ID to remove
Admin_updateorder_noexist_partid_20	Part ID does not exist	The part ID that you have entered does not exist
Admin_updateorder_noexist_orderid_21	Order ID does not exist	The order ID that you have entered does not exist
Admin_updateorder_noexist_partname_22	Part name does not exist	The part name that you have entered does not exist
Admin_invoicemake_no_invoiceID_24	No invoice ID entered	Please enter an invoice ID



Initial GUI Designs

Provided below are the designs that were brought forward by the members of the group.

← →

“Welcome to the Best Selling Toy Store”

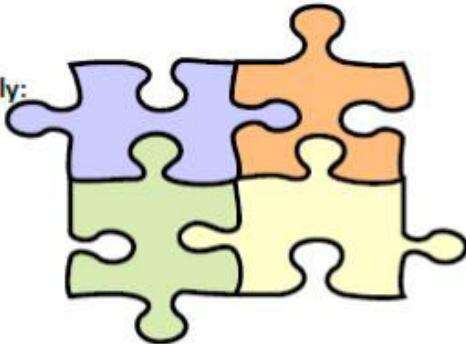
It's Play Time..... at an affordable Price for All!!!!!!

For Customer Use Only:

Search Products:

Categories: Cars, Dolls, Teddy bears, Puzzles, video games and many more in STORE!!!!

For Office Use Only:



User Name:

Password: →

Forgot password..... [click here!](#)

GUI 01



TOYToyerz

HOME PRODUCTS SPECIALS FIND A GIFT ABOUT US SIGN IN

SEARCH

products on special
(dynamic content)

news on the latests toys and
products
(dynamic content)

interesting facts and benefits about
toytoyerz
(dynamic content)

GUI 02

BANNER

Home Stuffed Animals Puzzles Board Games Winter Sale About Us Developers Cut Cart: 0

New Products in stock

Dynamic Content

First says Sign Up or Sign In

Specials Content Box

GUI 03





Version Log – Product Evaluation Document

Version	Authors	Date	Reason For Change
1.0	Tejas Dwarkaram	10/02/2014	Included new testing tools, based on the suggestions provided by the client
1.1	Nelio Lucas	14/02/2014	Added error codes to the error table
1.2	Tejas Dwarkaram	28/02/2014	Included JMeter as tool for Stress Testing
1.3	Tejas Dwarkaram	01/03/2014	Added subjects that can be used for testing usability testing
1.4	Nelio Lucas	02/03/2014	Added LoadUI as a tool for Load Testing
1.4.1	Tejas Dwarkaram	03/03/2014	Spell Check Performed
2.0	Tejas Dwarkaram	09/09/2014	Recreated Error Table
3.0	Tejas Dwarkaram	10/10/2014	Included initial GUI designs



ToyToyerz

User Guide

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Introduction

Purpose

The purpose of this document is to provide an instructive guide for staff users to fully utilize and understand the functions of the ToyToyerz management system. It contains an overview of all the different functions of the system. (Administrators have added features – review Operations and maintenance guide).

Scope

This document aims to demonstrate the features available to staff members, mainly:

- Logging into the staff panel
- Generating Quotes
- Performing Sales
- Viewing Quotes
- Viewing Invoices

Logging in

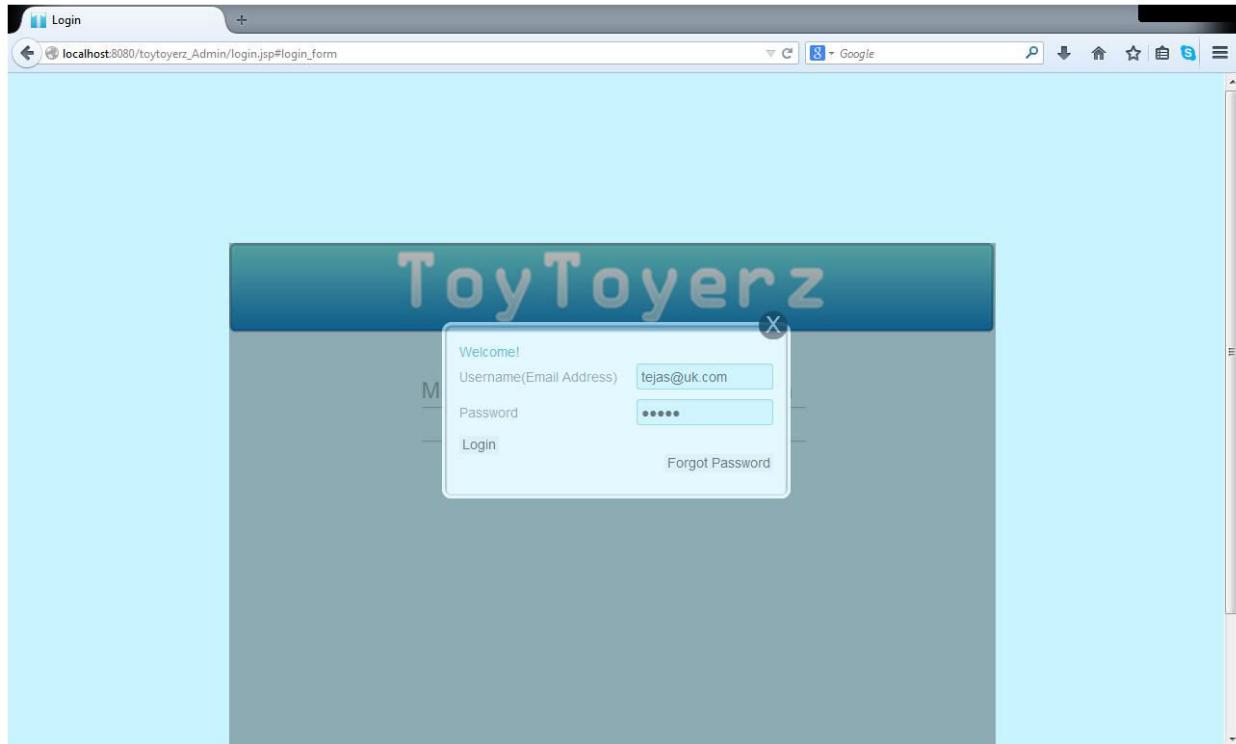
Every staff member will be given a username (email) and password, these details will be required to log into the system. Figure 1.1 demonstrates the login screen and by pressing “Proceed. Staff members are then prompt to enter their username and password.

Figure 1.1



Figure 1.2 depicts the login box that appears after the “Proceed” button is clicked, staff members are required to enter their username and passwords into the login box and click login to access the system.

Figure 1.2

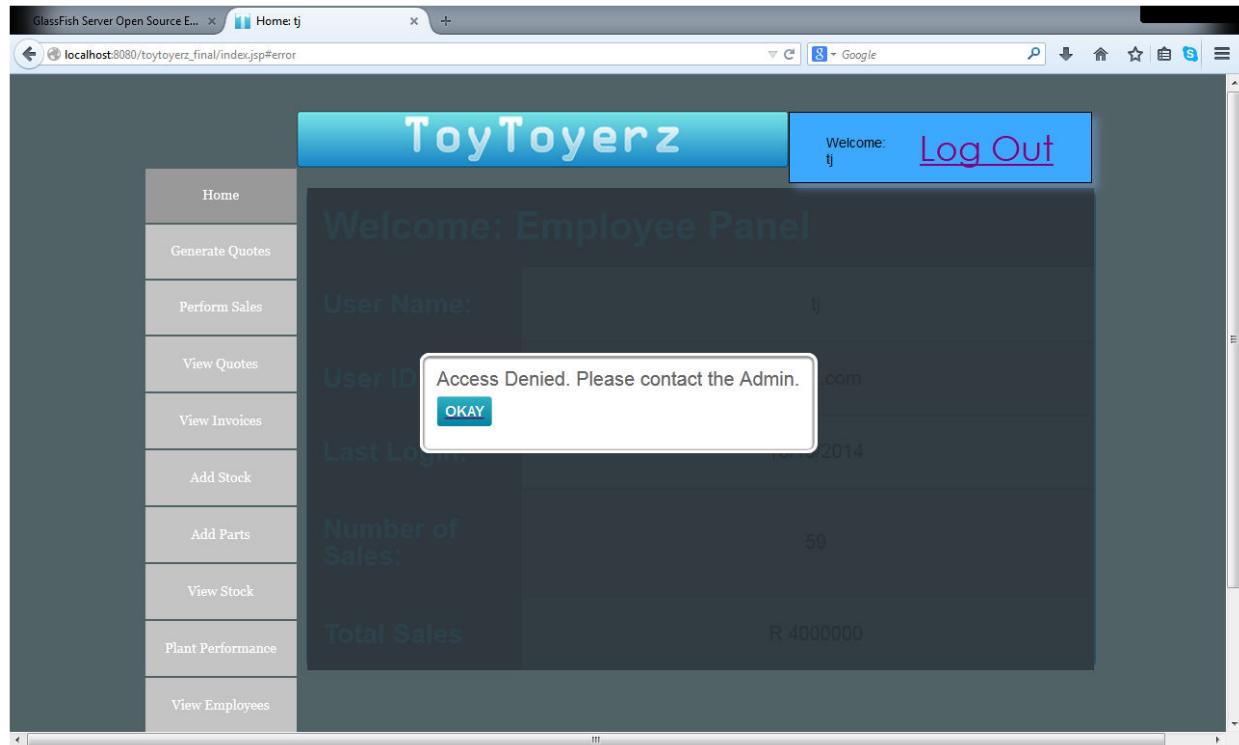


Staff panel (main screen)

Figure 1.3 represents the main screen that provides the following features, where the first 5 are the only ones available to staff for staff members (the other features can be viewed in the Operations and user guide)

1. Home
2. Generate Quotes
3. Perform sales
4. View Quotes
5. View Invoices
6. Add Stock
7. Add Parts
8. View Stock
9. Plant Performance
10. View Employees

Figure 1.3



View Quotes

Figure 1.4 depicts what happens when the “View Quotes” button is clicked. As displayed, a small pop up box with information on every quote in the database is shown

Figure 1.4

The screenshot shows a web application interface for 'ToyToyerz'. At the top, there's a header bar with the title 'View Invoices' and a URL 'localhost:8080/toytoyerz_final/view-invoices.jsp#inv1'. The main content area features a blue header 'ToyToyerz' and a 'Log Out' button. A sidebar on the left contains links like Home, Generate Quotes, Perform Sales, View Quotes, View Invoices (which is highlighted), Add Stock, Add Parts, View Stock, Plant Performance, and View Employees. The main table displays four invoices with columns: Invoice ID, Invoice Date, Sale Amount, and Company ID. A modal dialog is open over the table, showing detailed information for the fourth invoice (inv4). The modal has a header 'Product ID Product Name Product Desc Price Quantity', followed by three rows of data: a03 Baby Born female baby doll 420 10, c01 Playstation 4 gaming console 9100 1, and c02 Xbox One gaming console 112004. A 'CLOSE' button is at the bottom of the modal.

Invoice ID	Invoice Date	Sale Amount	Company ID
inv1	2013-07-08	9100.0	com1
inv2	2013-07-09	2100.0	com2
inv3		0.0	com3
inv4		0.0	com4

Product ID	Product Name	Product Desc	Price	Quantity
a03	Baby Born	female baby doll	420	10
c01	Playstation 4	gaming console	9100	1
c02	Xbox One	gaming console	112004	

CLOSE

[View Invoices](#)

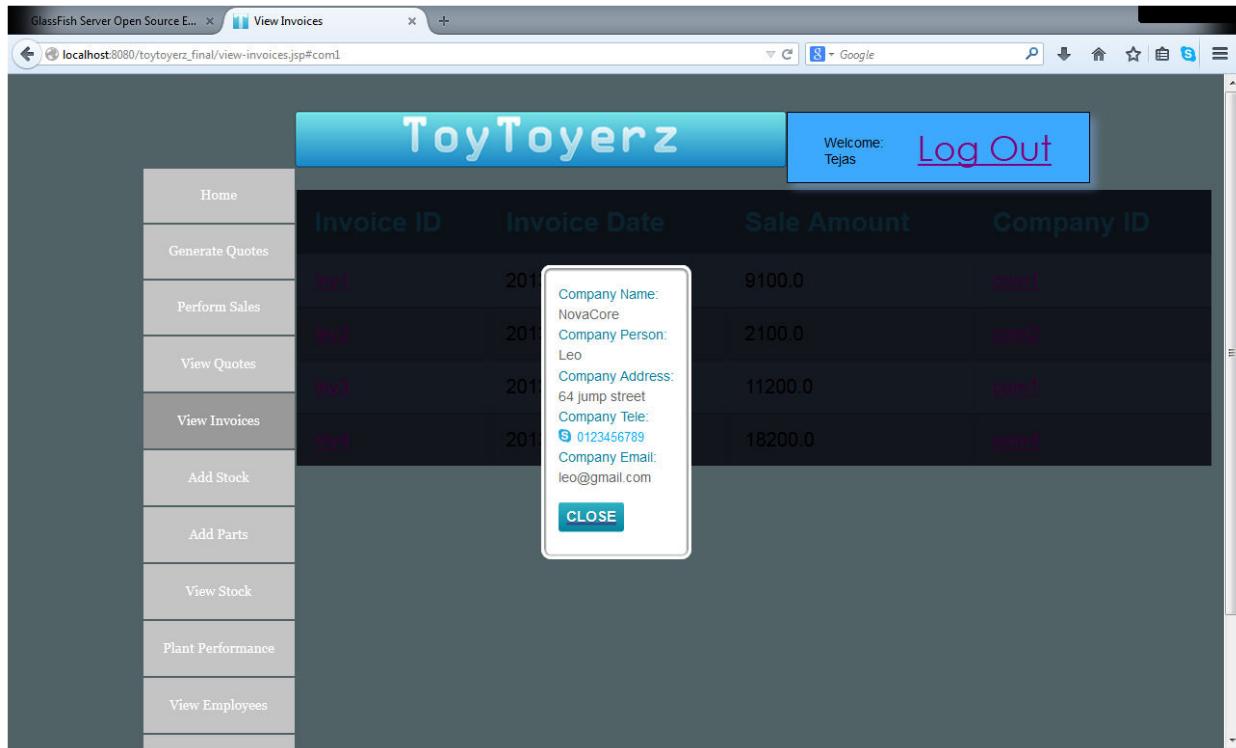
Figure 1.5 represents the information that is displayed when the “View Invoice” button is clicked. As shown, information on every invoice stored in the database is displayed. Figure 1.6 is an illustration of what happens when the invoiceID of a particular sale is clicked, as displayed, a small popup box with the information of the company involved in the sale is displayed.

Figure 1.5

The screenshot shows a web application interface for 'ToyToyerz'. At the top, there's a header bar with the title 'View Invoices' and a sub-header 'localhost:8080/toytoyerz_final/view-invoices.jsp'. The main content area has a blue header 'ToyToyerz' and a 'Log Out' link. On the left, a sidebar lists navigation options: Home, Generate Quotes, Perform Sales, View Quotes, View Invoices (which is highlighted), Add Stock, Add Parts, View Stock, Plant Performance, and View Employees. The central part of the screen displays a table with the following data:

Invoice ID	Invoice Date	Sale Amount	Company ID
inv1	2013-07-08	9100.0	com1
inv2	2013-07-09	2100.0	com2
inv3	2013-07-09	11200.0	com1
inv4	2013-07-10	18200.0	com4

Figure 1.6



Supplement guides

Operations and Maintenance Guide

The purpose of this document is to demonstrate the functions that are accessible to the administrator only, note that staff member functions are still applicable to administrators, just not vice versa.

Client Side Demonstration (beta)

The purpose of this document is to demonstrate the beta version for the client side interface of the ToyToyerz management system



ToyToyerz

Operation and Maintenance

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Sabelo Mabuza – Pending



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Introduction

Purpose

The purpose of this document is to provide an instructive guide of the administrative functions of the ToyToyerz management system, also a guide on how to deploy the system onto a host computer.

Scope

This document aims to demonstrate the functions only accessible to the administrators of the system, mainly

- Adding Stock
- Adding Parts
- View Stock
- Plant Performance
- View Employees
- View Companies

This document also contains a guide on how to deploy the system onto a host computer.

Logging in

Administrators are given a username (email) and password, these details will be required to log into the system. Figure 1.1 demonstrates the login screen and by pressing “proceed. Administrators are then prompt to enter their username and password to access the system. Figure 1.2 is the administration panel

Figure 1.1

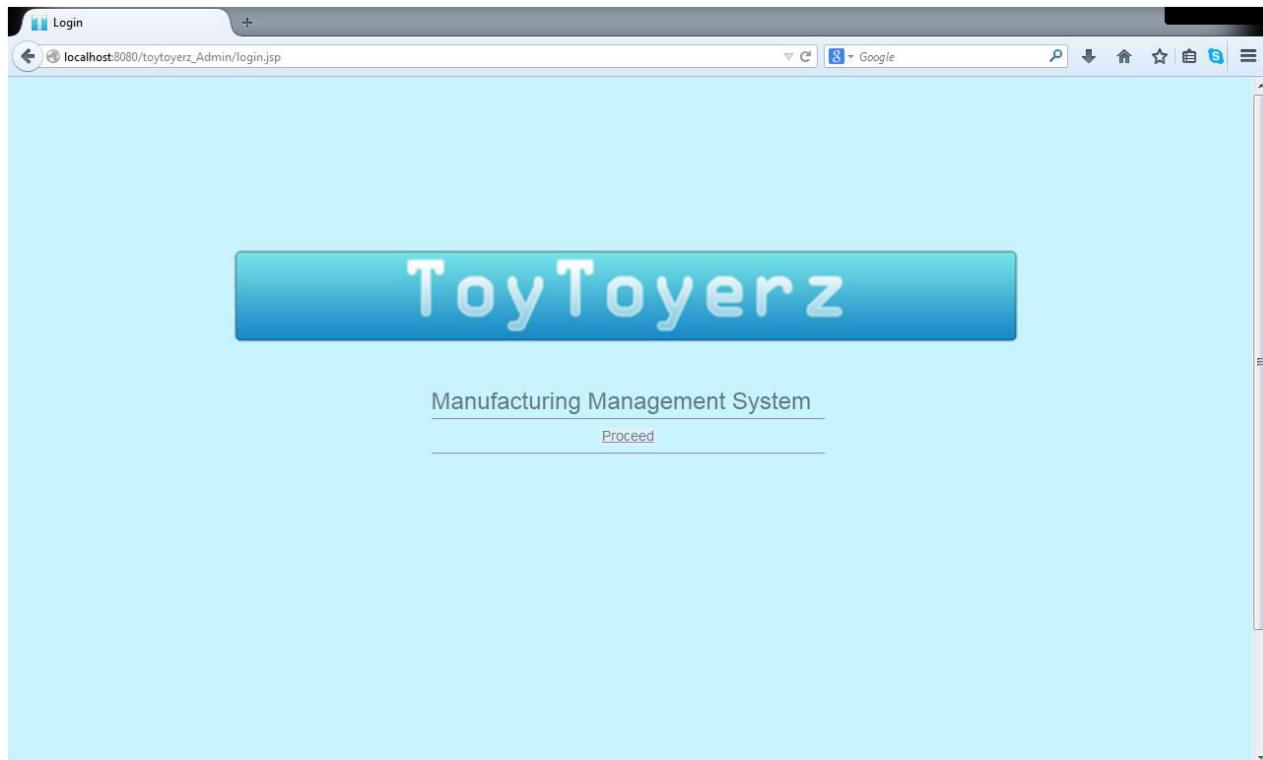


Figure 1.2

The screenshot shows a web browser window for the 'ToyToyerz' administrative panel. The URL in the address bar is `localhost:8080/toytoyerz_Admin/index.jsp?user=Tejas`. The page title is 'Home: Tejas'. The main content area displays the following user information:

User Name:	Tejas
User ID:	tejas@uk.com
Last Login:	18/10/2014
Number of Sales:	59
Total Sales	R 20000

The top right corner shows a 'Welcome: Tejas' message and a 'Log Out' link. The top left corner has a 'ToyToyerz' logo. On the far right, there is a vertical scroll bar.

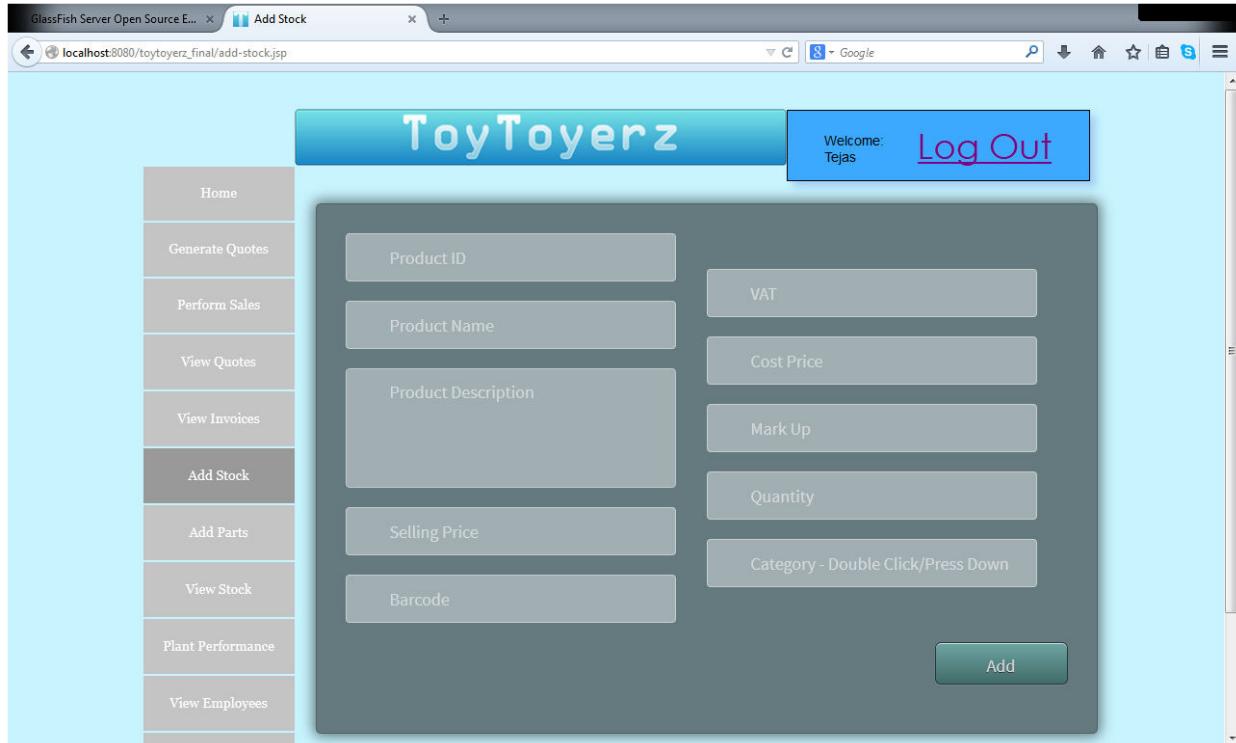
The left sidebar contains a vertical list of navigation links:

- Home
- Generate Quotes
- Perform Sales
- View Quotes
- View Invoices
- Add Stock
- Add Parts
- View Stock
- Plant Performance
- View Employees

Adding stock

Figure 1.3 represents the page that is displayed when the administrator clicks the “Add Stock” button. As displayed, there are text boxes with writing in them specifying what type of information is expected to be entered in it. Once all text boxes are filled in, the Administrator must click “Add”, to enter stock into the database.

Figure 1.3



The screenshot shows a web browser window for GlassFish Server Open Source E... with the title "Add Stock". The URL is localhost:8080/toytoyerz_final/add-stock.jsp. The page has a header "ToyToyerz" and a welcome message "Welcome: Tejas" with a "Log Out" link. On the left is a sidebar menu with links: Home, Generate Quotes, Perform Sales, View Quotes, View Invoices, Add Stock (which is highlighted), Add Parts, View Stock, Plant Performance, and View Employees. The main content area is titled "Add Stock" and contains fields for Product ID, Product Name, Product Description, Selling Price, Barcode, VAT, Cost Price, Mark Up, Quantity, and Category (with a note: "Category - Double Click/Press Down"). A green "Add" button is at the bottom right.

Product ID	VAT
Product Name	Cost Price
Product Description	Mark Up
Selling Price	Quantity
Barcode	Category - Double Click/Press Down

Add

View Stock

Figure 1.4 is a representation of the View Stock button. The View Stock button displays every product and its details that is recorded in the database. Once again this information is only authorized to administrators

Figure 1.4

The screenshot shows a web browser window with the title "View Stock". The URL is "localhost:8080/toytoyerz_final/view-stock.jsp". The page has a header "ToyToyerz" and a welcome message "Welcome: Tejas" with a "Log Out" link. On the left, there is a sidebar menu with links: Home, Generate Quotes, Perform Sales, View Quotes, View Invoices, Add Stock, Add Parts, View Stock (which is highlighted), Plant Performance, and View Employees. The main content area contains a table with the following data:

Product Name	Product Description	Price	Barcode	VAT	Quantity
Action Man	male action figure	700.0	3367012	17%	100
Barbie Playhouse	female doll house	1540.0	85206508	17%	100
Baby Born	female baby doll	420.0	48982837	17%	100
TMNT	mutant ninja turtle action figures	182.0	73455380	17%	100
G.I. Joe	action figure	210.0	36624803	17%	100
OptimusPrime	transformer action figure	280.0	43387732	17%	100
Buzz Light Year	ToyStory action figure	420.0	62262113	17%	100
Woody	ToyStory action figure	420.0	5357831	17%	100
AngeyBirds					

View Employees

Figure 1.5 is a representation of the View Employee button. The View Stock button displays every Employee/staff member and their details that is recorded in the database. Once again this information is only authorized to administrators.

Figure 1.5

The screenshot shows a web browser window with the title "GlassFish Server Open Source E... View Employees". The URL in the address bar is "localhost:8080/toytoyerz_final/view-employees.jsp". The main content area has a blue header with the logo "ToyToyerz" and a "Log Out" link. On the left, there is a sidebar with various menu items. The "View Stock" item is highlighted with a pink background. The main content area displays a table of staff members:

Staff Name	Staff Surname	Email	Work Attendance
Archer	Stirling	Archer@uk.com	15
tj	dwar	c@uk.com	23
Lana	Del Ray	Lana@uk.com	20
Lin	Lindy	lin@uk.com	21
Pamela	Fritz	Pam@uk.com	22
Spiwe	Longolo	spiwe@uk.com	20
Tyron	McDonald	tyron@uk.com	22

View Companies

Figure 1.6 is a representation of the View Companies button. The View Companies button displays every company and its details that is recorded in the database. Once again this information is only authorized to administrators.

Figure 1.6

The screenshot shows a web application interface for 'ToyToyerz'. At the top, there's a navigation bar with tabs for 'GlassFish Server Open Source E...' and 'View Companies'. The URL in the address bar is 'localhost:8080/toytoyerz_final/view-companies.jsp'. On the right side of the header, it says 'Welcome: Tejas' and has a 'Log Out' link. The main content area is titled 'ToyToyerz' and contains a table with company data. The table has columns: Company, Contact Person, Company Address, Telephone, and Email. The data is as follows:

Company	Contact Person	Company Address	Telephone	Email
NovaCore	Leo	64 jump street	0123456789	leo@gmail.com
DungeonCo	Bert	22 maple street	574642367	bert@gmail.com
ToysRus	Bob	88 stuarthooz street	4579132648	bob@gmail.com
GameWorld	Kate	23 murray street	9754238463	kate@gmail.com
NewGen	Pretty	34 Dafadal Street	0829589859	newgen@gmail.com

The left sidebar contains links for Home, Generate Quotes, Perform Sales, View Quotes, View Invoices, Add Stock, Add Parts, View Stock, Plant Performance, and View Employees.

System Deployment

In order to run the system the following is needed:

- Netbeans 8.0 or higher
- Mysql-installer-community-5.5.36.0 or higher
- Internet browser (Firefox/Google Chrome/Safari)

Installing Netbeans

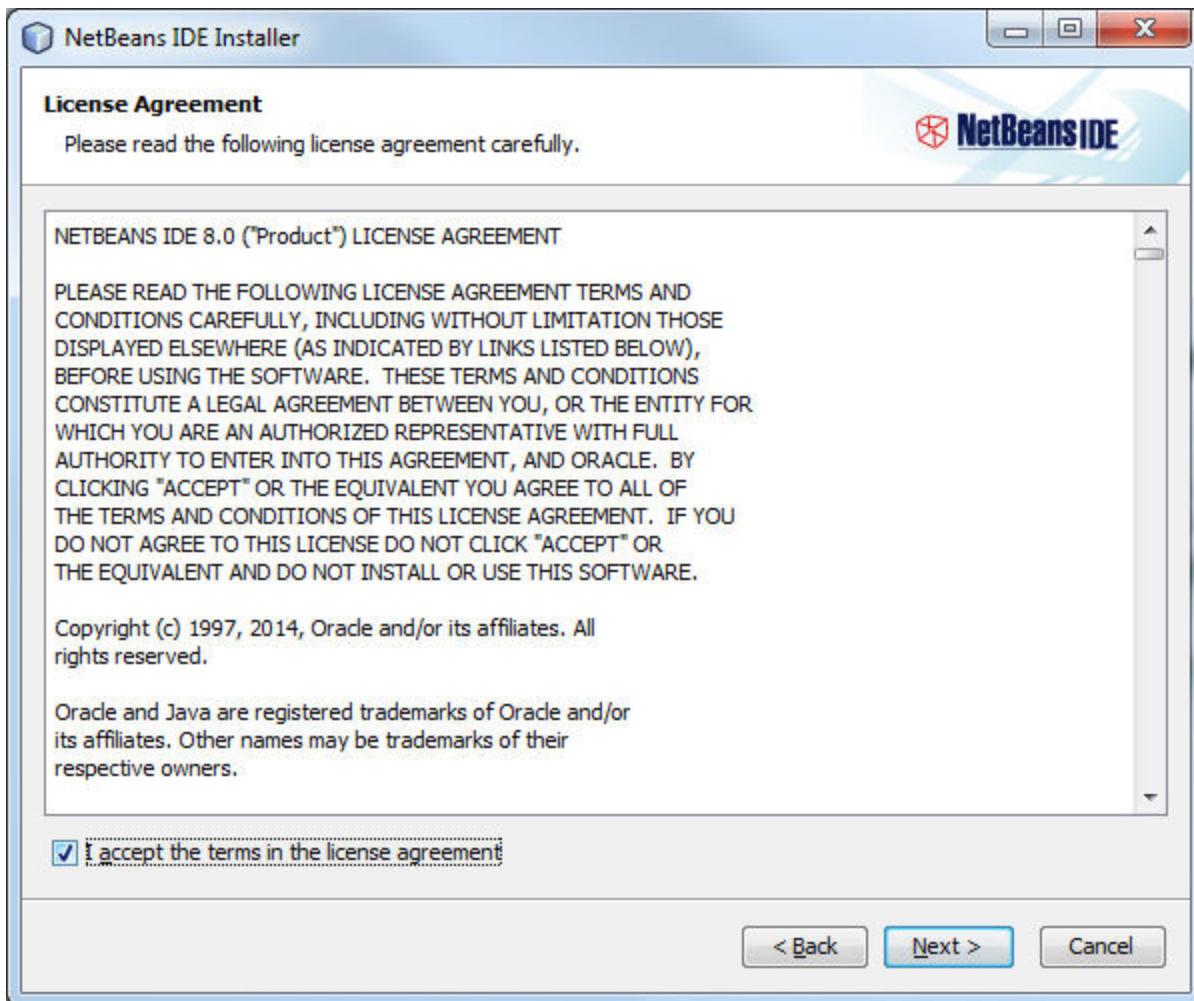
Step 1

Double click the installer, and when prompt, click next.



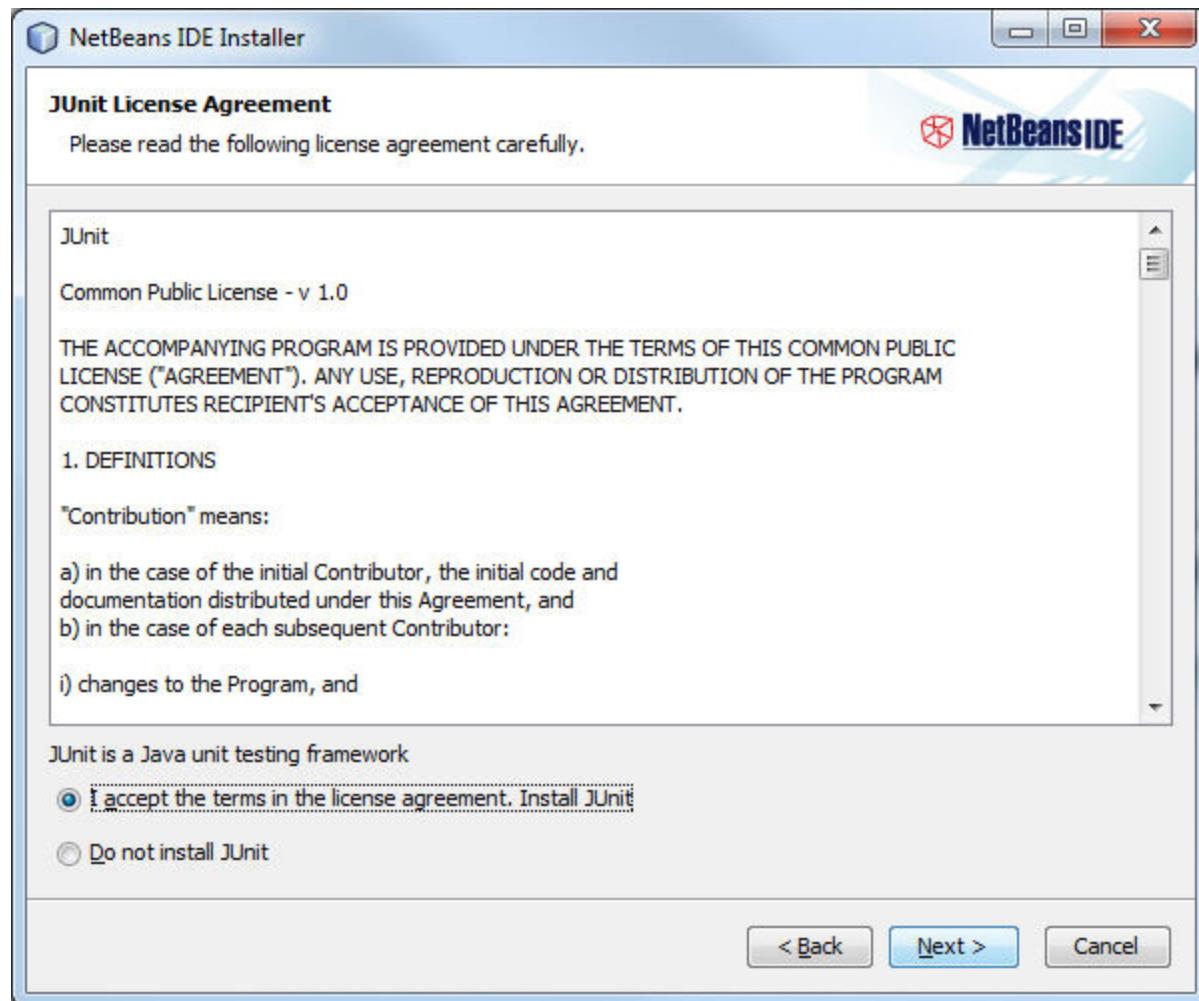
Step 2

Click the check box to accept the licensing agreement then click next.



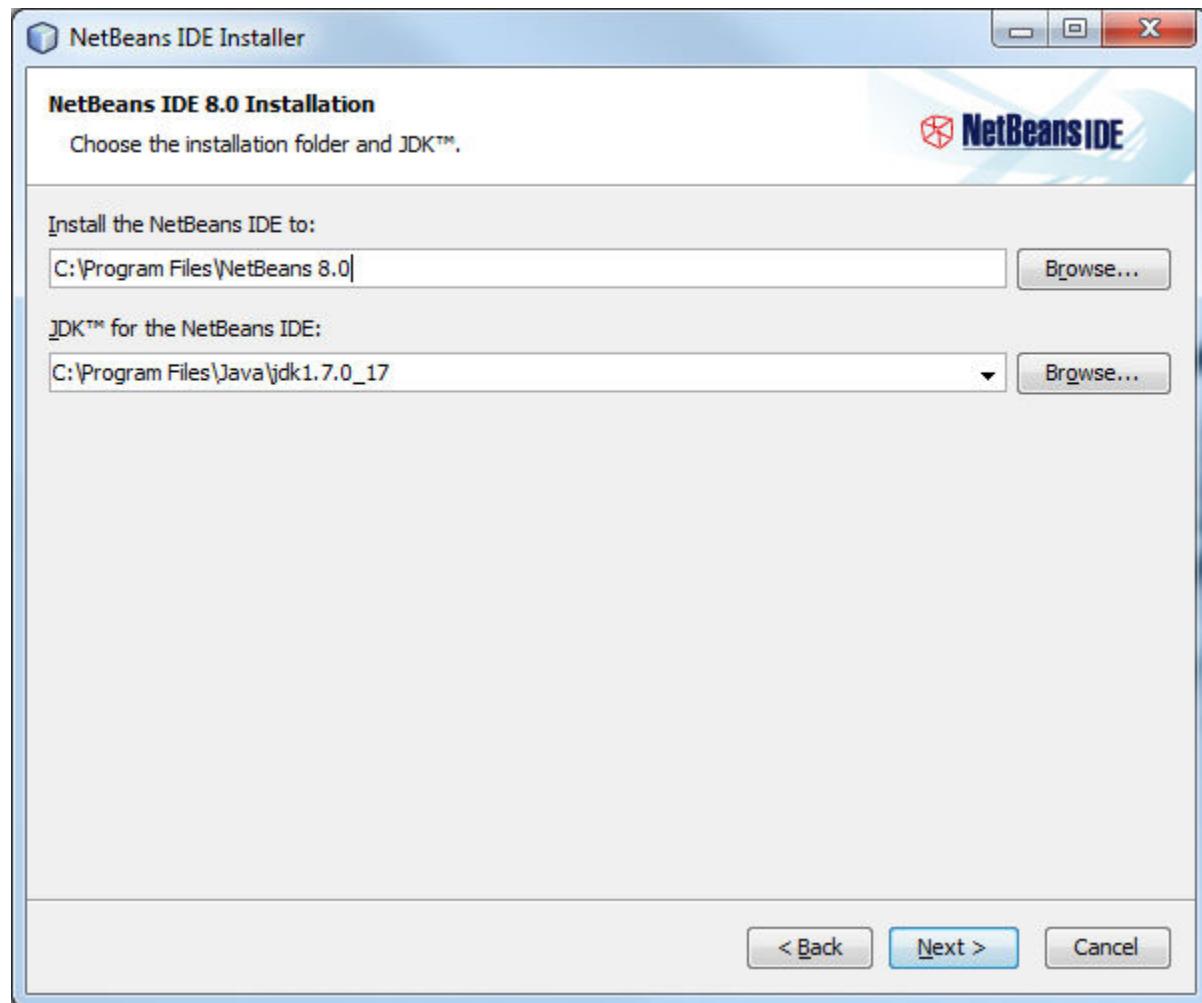
Step 3

Click the check box to accept the Junit License agreement then click next.



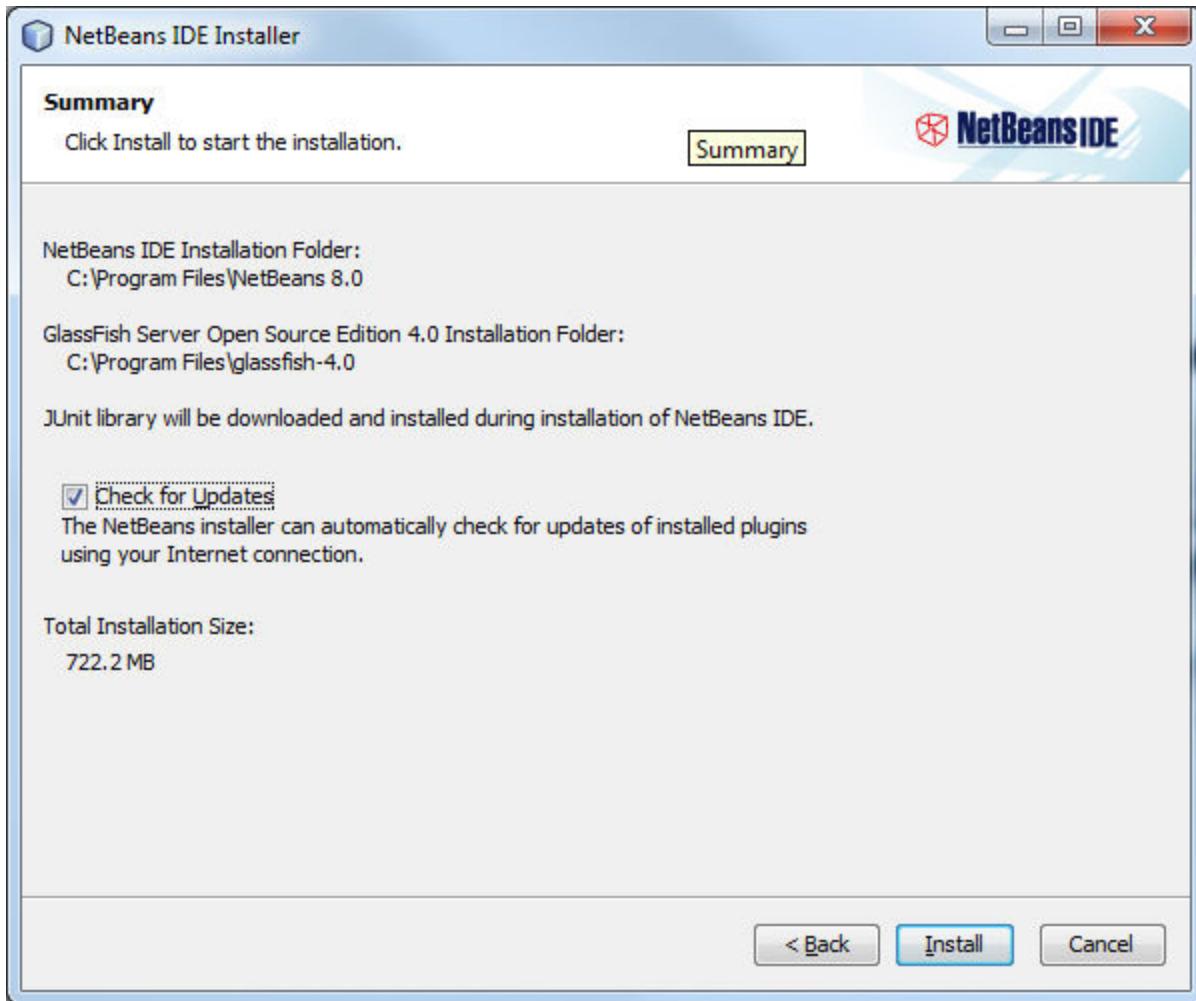
Step 4

Choose your directory (recommended to leave it as default) and click next twice



Step 5

Click on install and wait a few minutes for Netbeans to complete installing



Installing the database (mysql-installer-community)

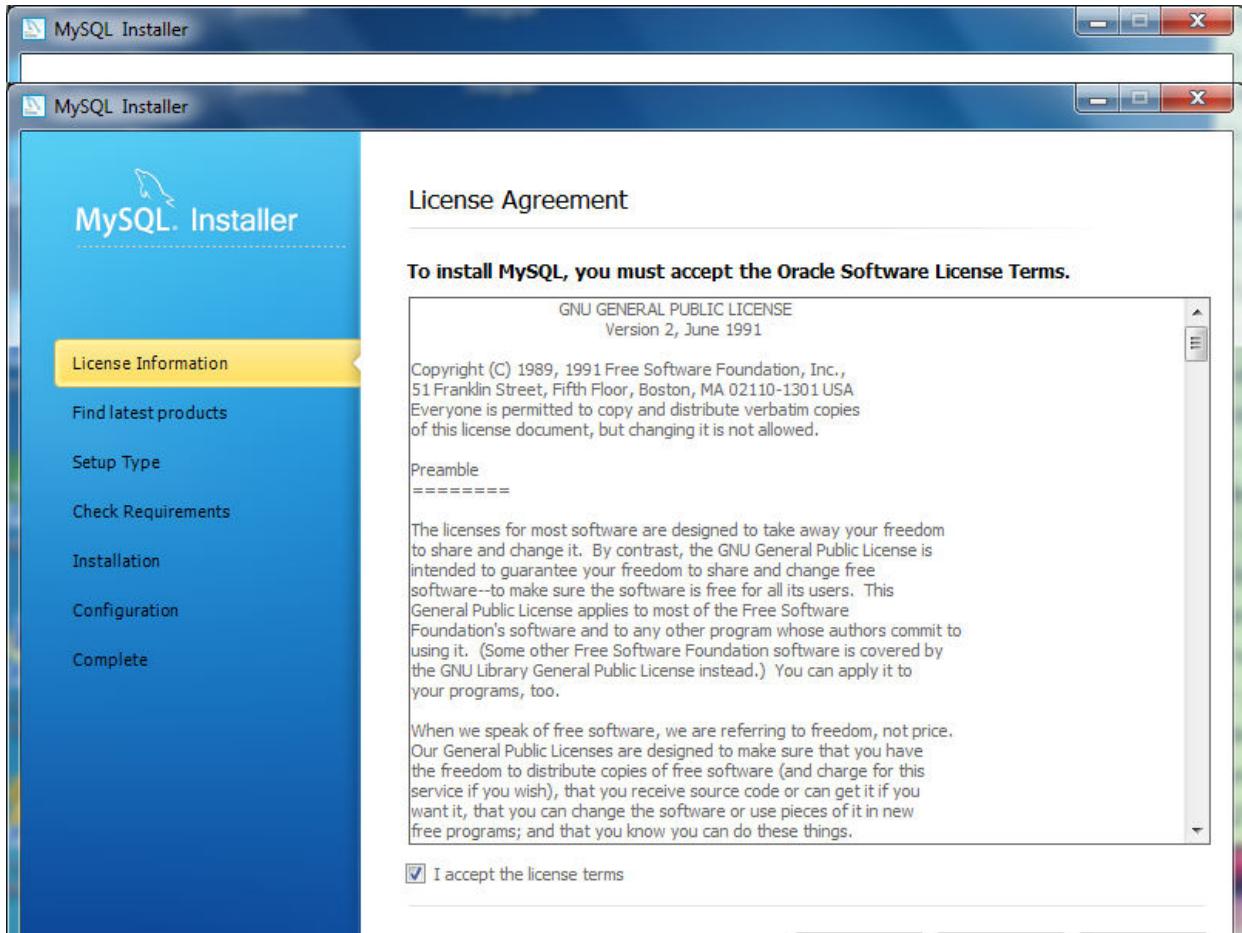
Step 1

Double click on the installer, wait for the next window to appear then click on “Install MySQL Products”



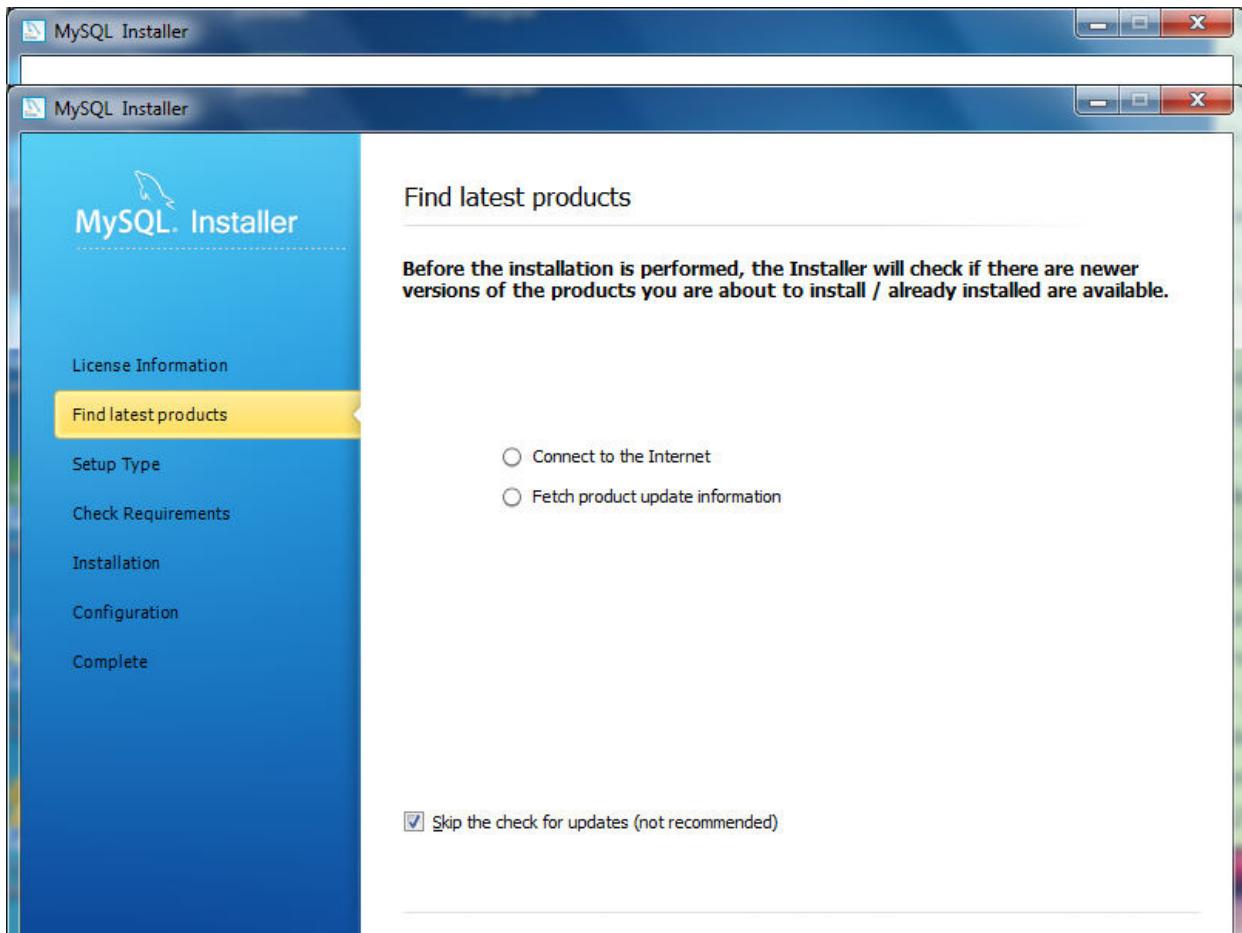
Step 2

Click the check box to accept the license agreement and click next



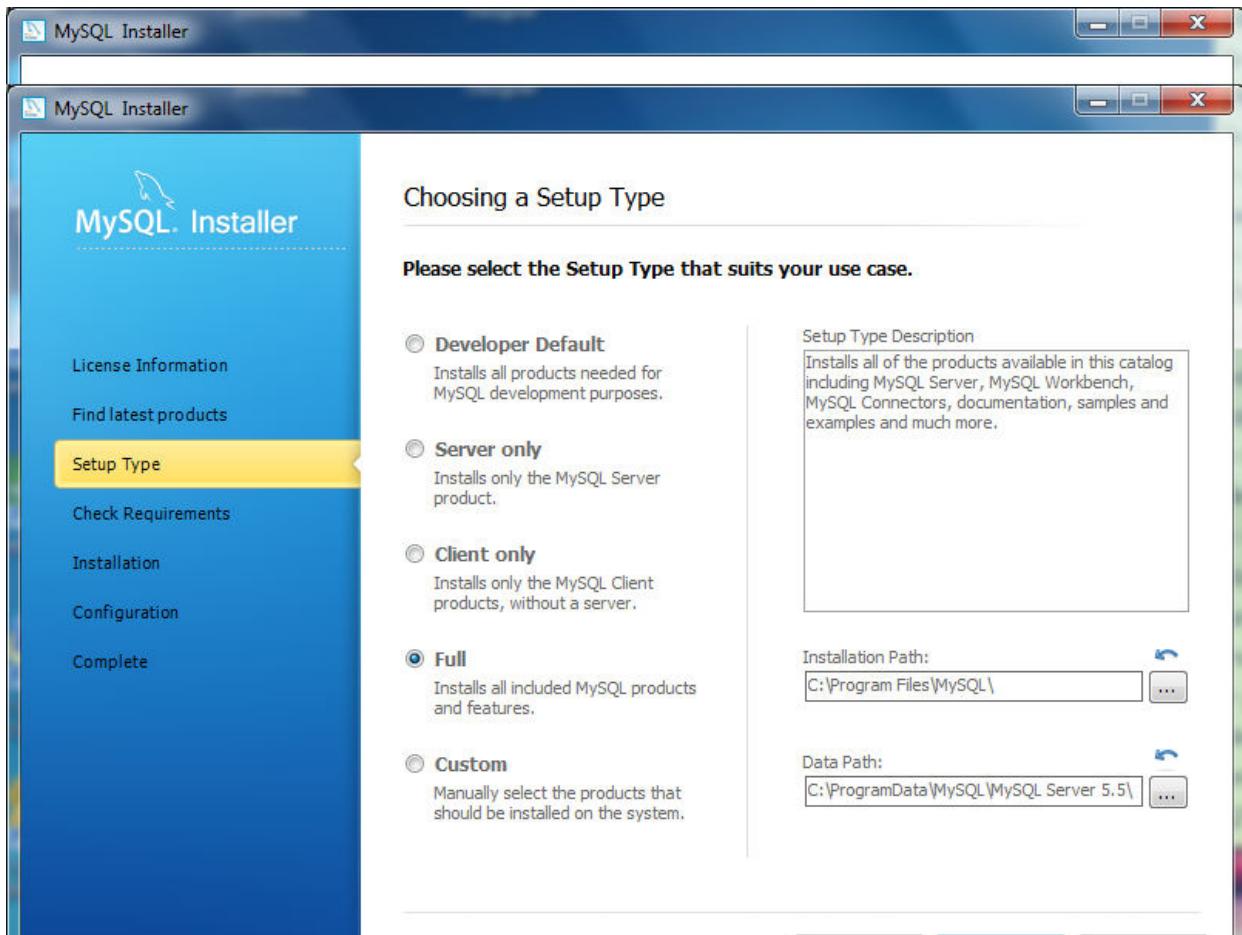
Step 3

Click the check box to skip updates and click next



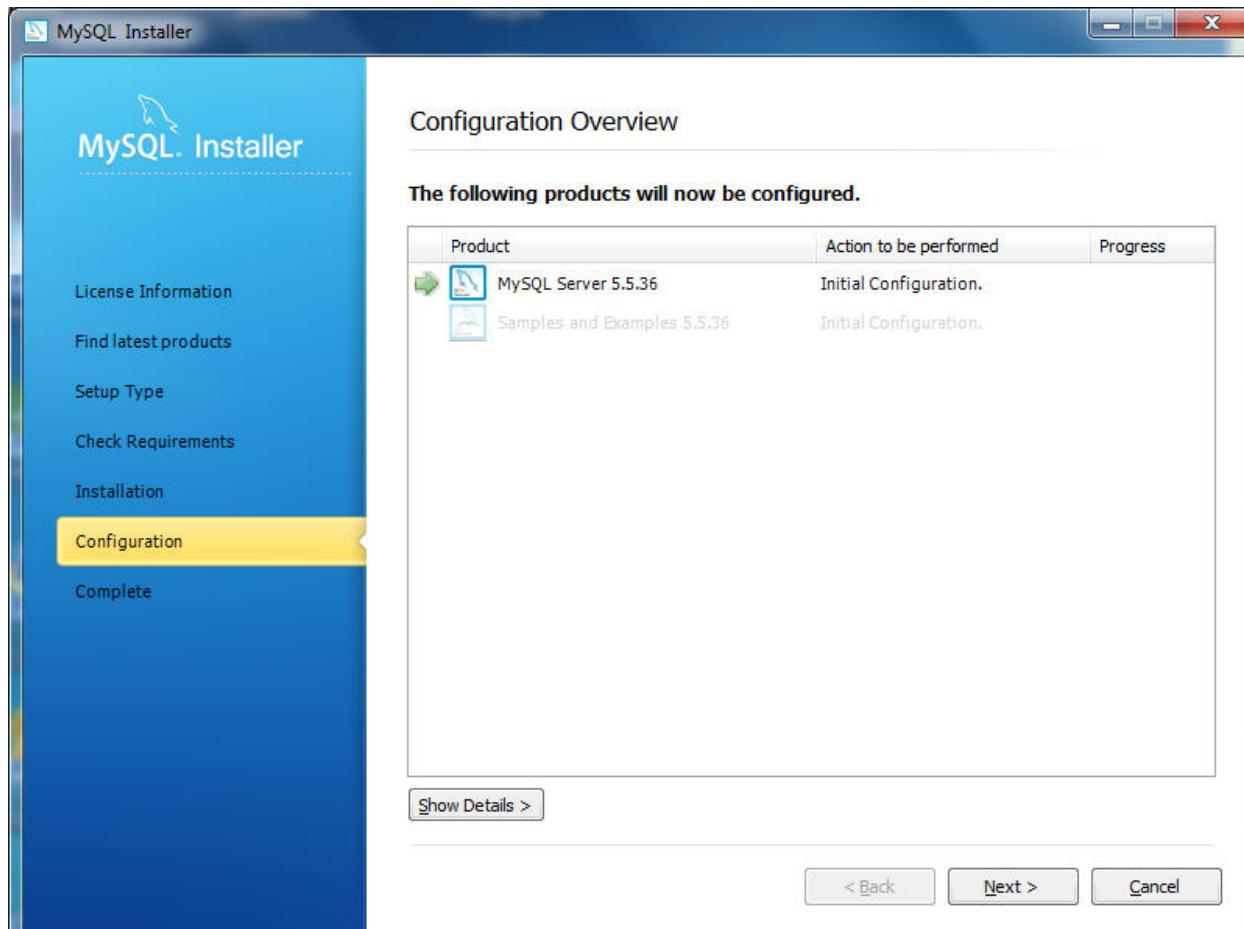
Step 4

When choosing a type, select Full then click next, then execute and wait for each component to install



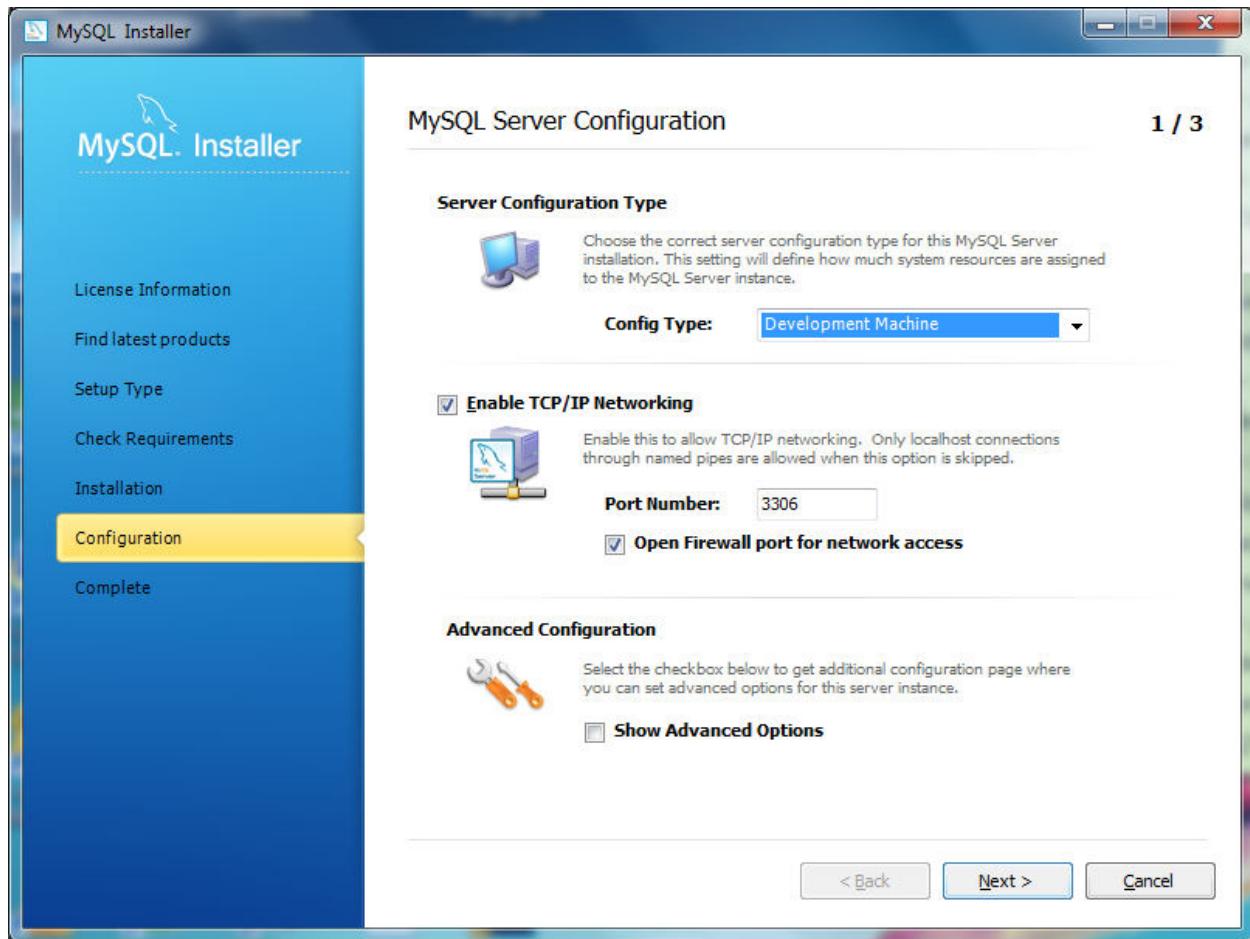
Step 5

When the installation is complete click next twice to perform both actions displayed



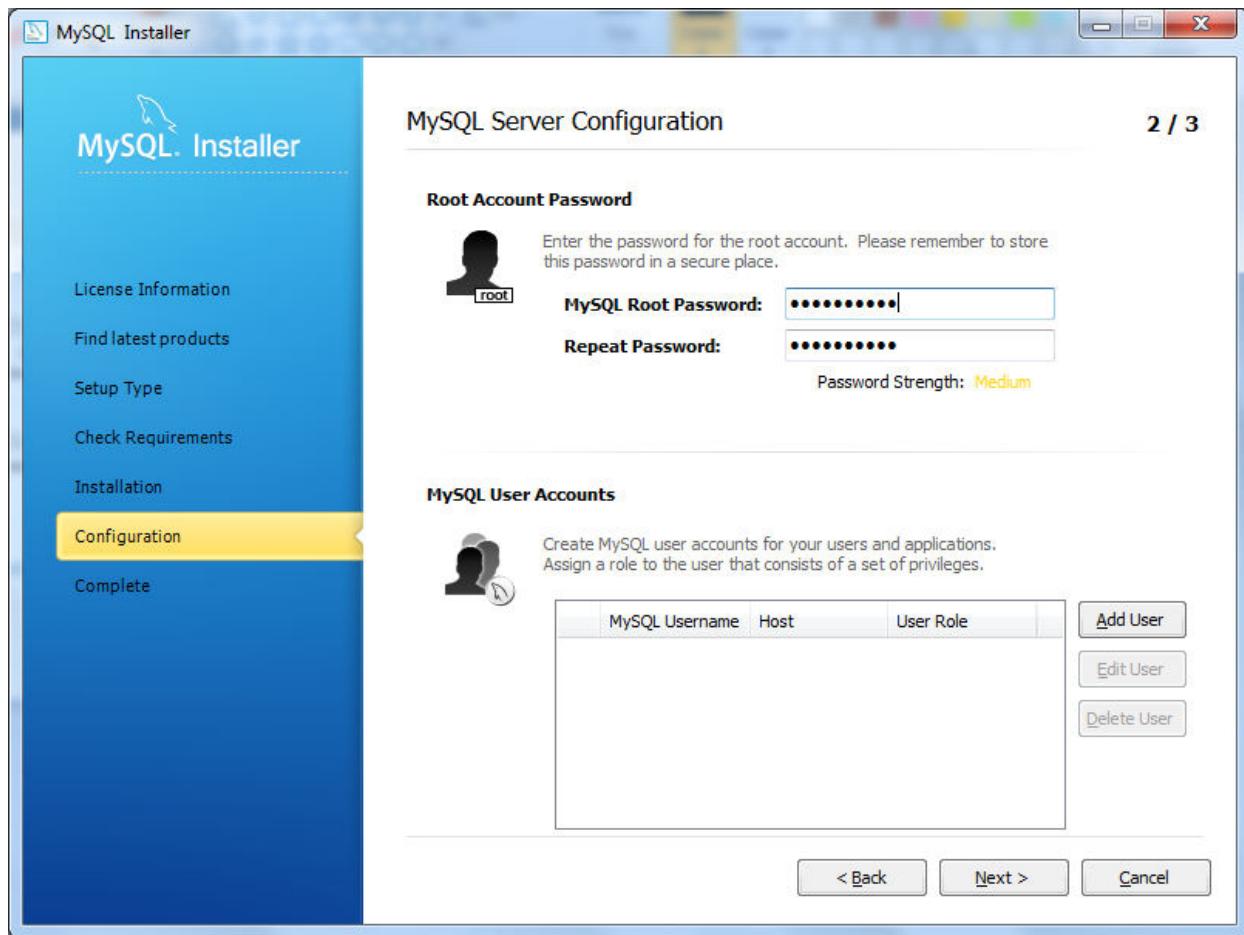
Step 6

When the following screen appears click next



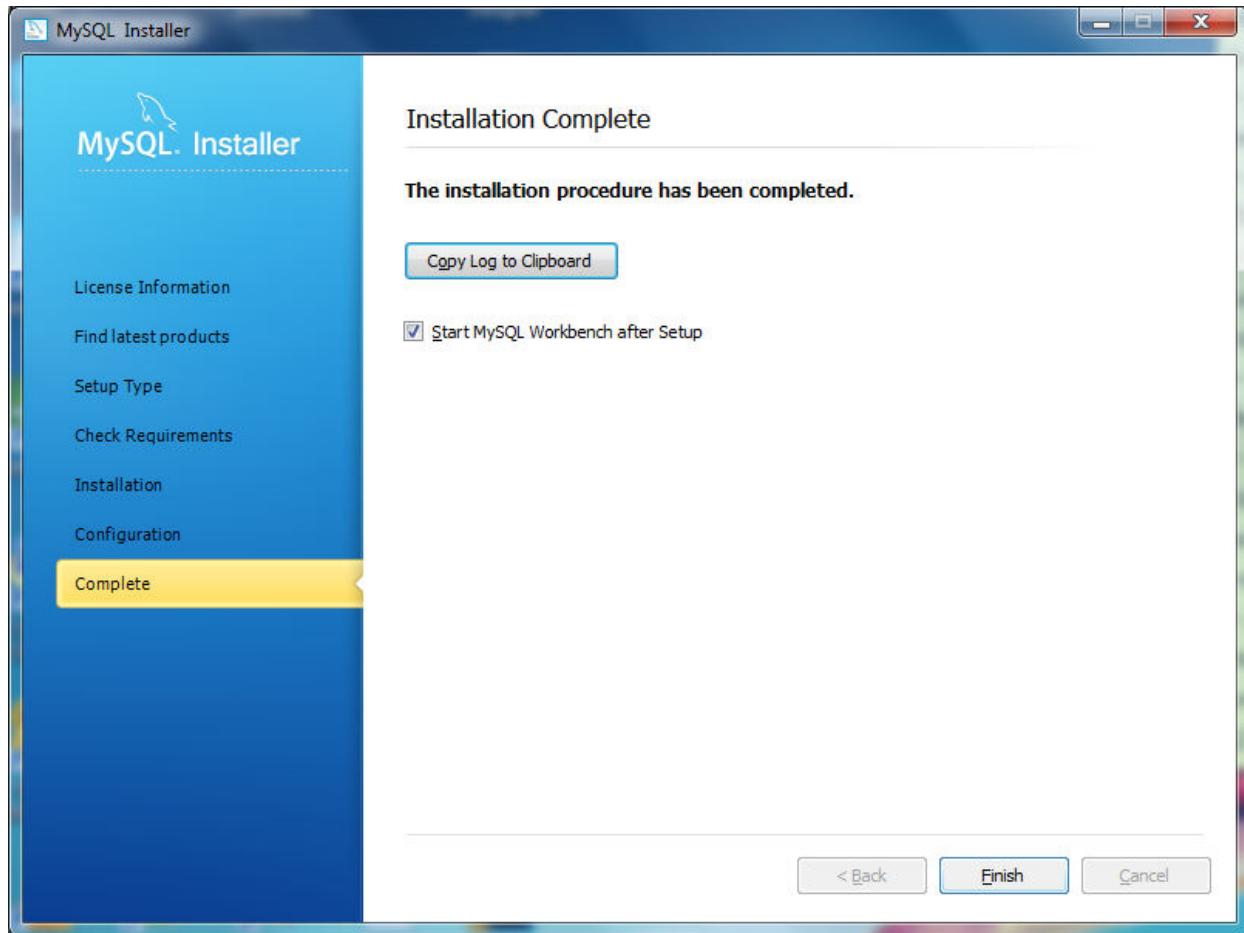
Step 7

Enter a mysql root password, make sure its strong or medium then click next



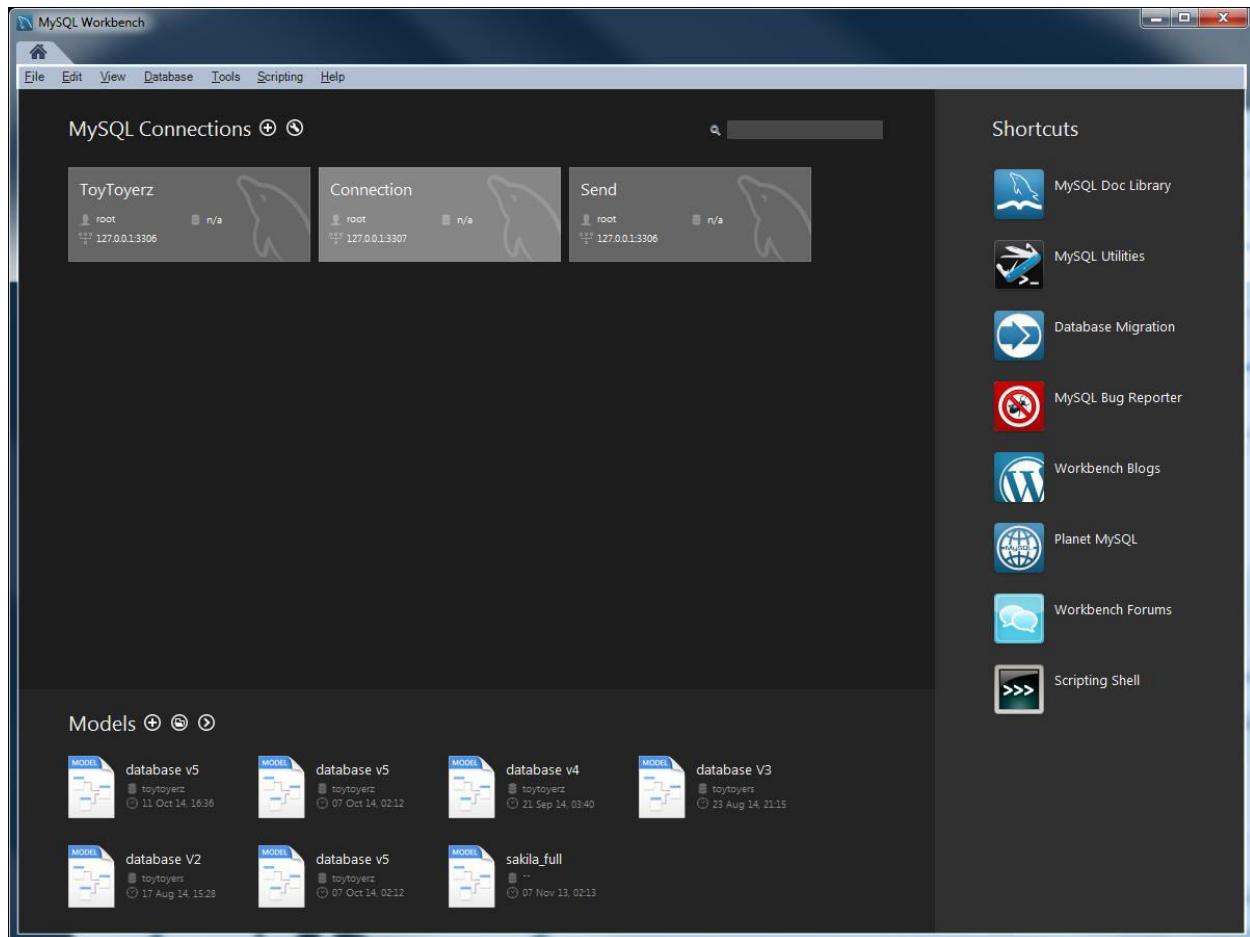
Step 8

Click next 3 times then click finish



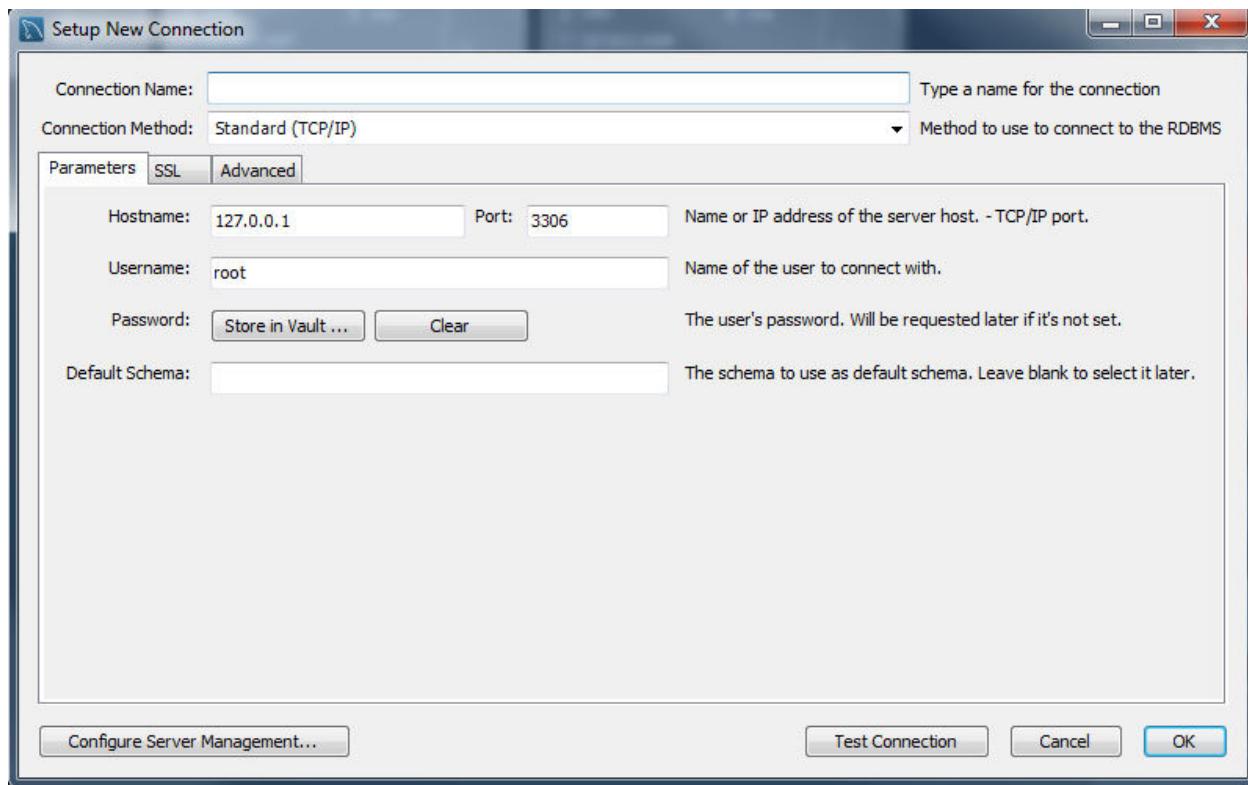
Step 9

Open mysql workbench and click on the “+” sign that is to the right of MySql Connections.



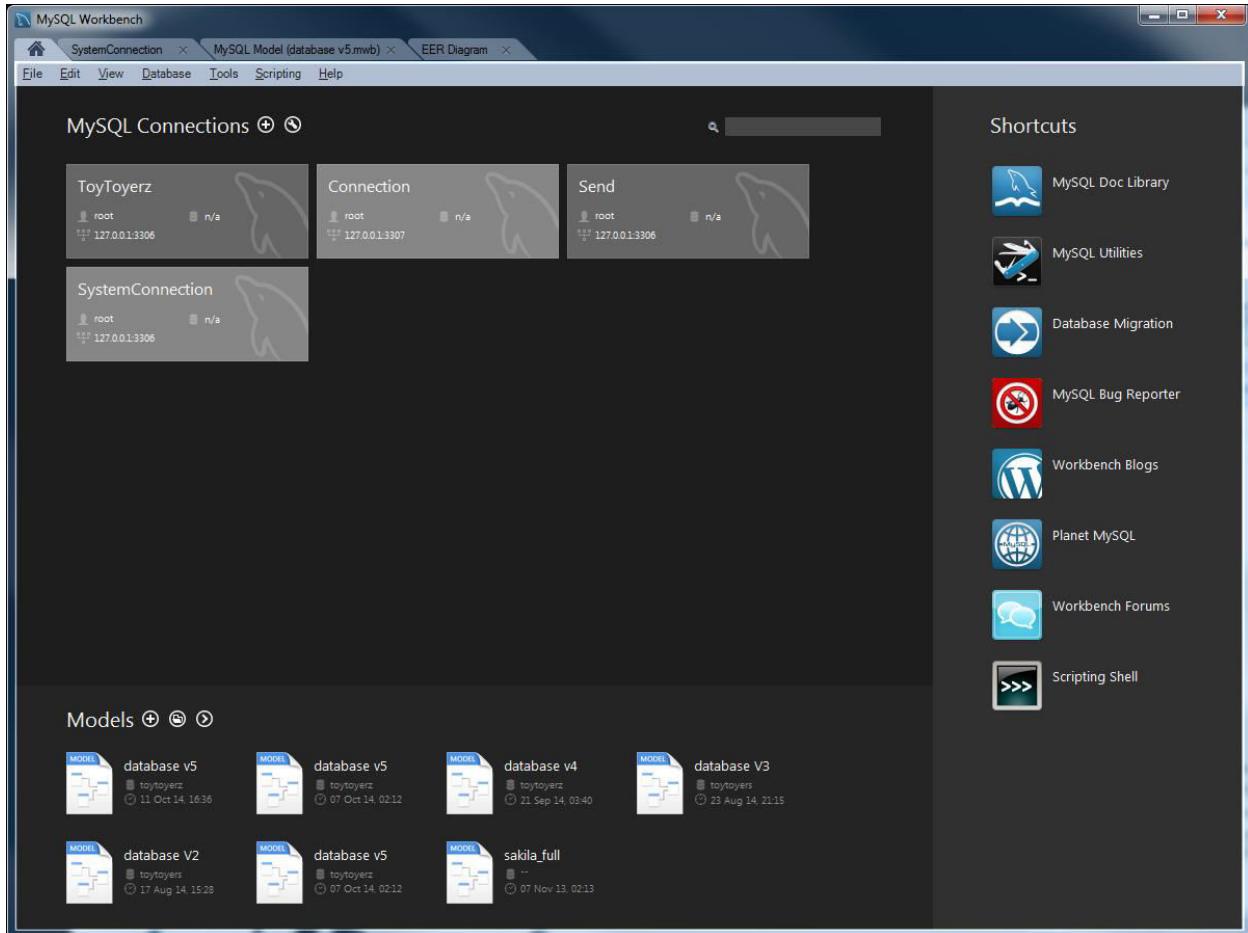
Step 10

Enter a connection name (e.g. DatabaseConnection) and click OK



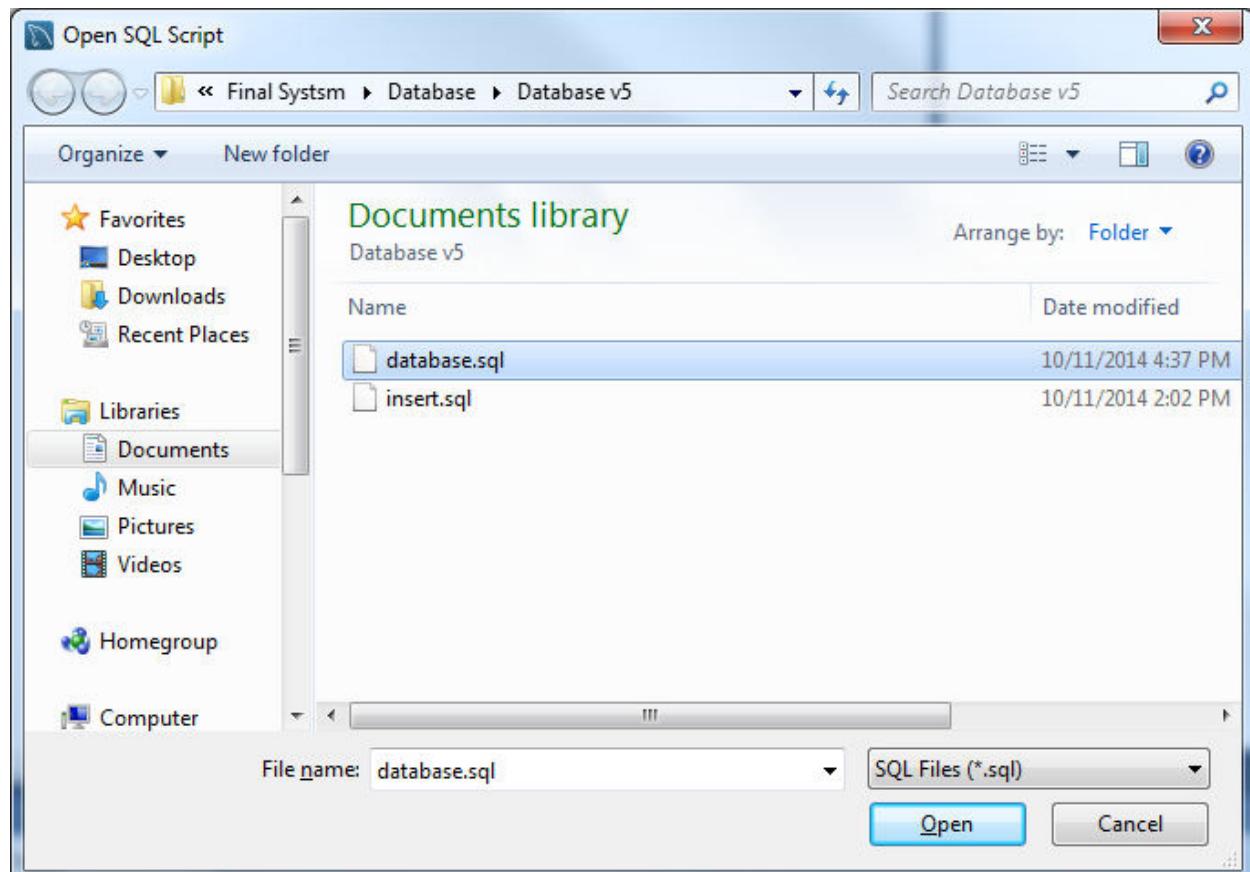
Step 11

Double click on the connection you created (in this case “DatabaseConnection”) and the script editor will appear.



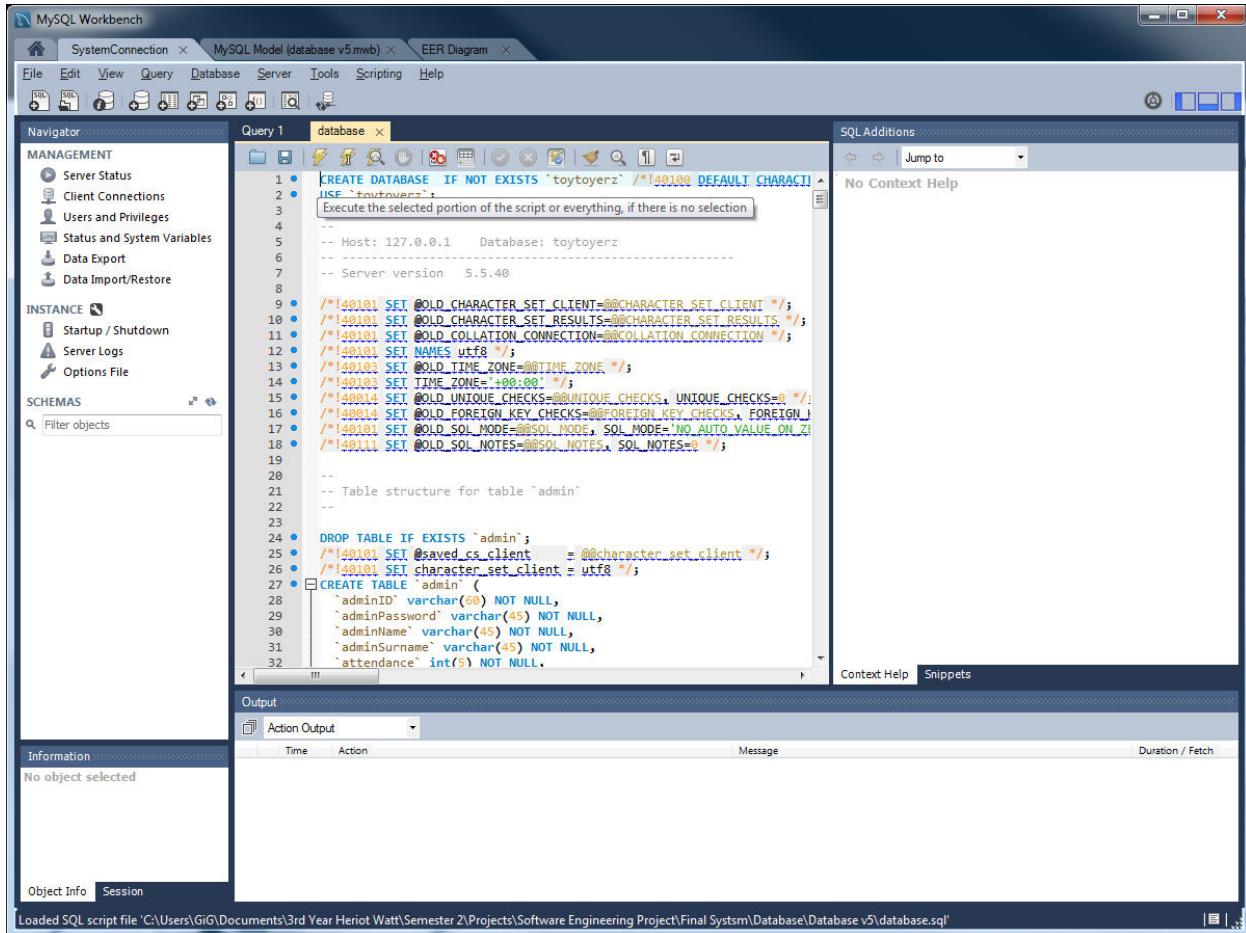
Step 12

Now that the script editor is open, we can create the database press Ctrl + Shift + O to locate the "database.sql" (it is included in the deployment package) then click open.



Step 13

When you click open, the following code will appear in the script editor, when it does press Ctrl + Enter to run the database script.



The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the database structure with nodes like MANAGEMENT, INSTANCE, and SCHEMAS.
- Query Editor:** Contains the following SQL script:

```
1 • CREATE DATABASE IF NOT EXISTS `toytoyerz` /*140101 DEFAULT CHARACTER SET latin1 COLLATE latin1_swedish_ci*/;
2 • USE `toytoyerz`;
3 • Execute the selected portion of the script or everything, if there is no selection
4 --
5 -- Host: 127.0.0.1 Database: toytoyerz
6 --
7 -- Server version 5.5.40
8
9 • /*140101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
10 • /*140101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
11 • /*140101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
12 • /*140101 SET NAMES utf8 */;
13 • /*140103 SET @OLD_TIME_ZONE=@TIME_ZONE */;
14 • /*140103 SET TIME_ZONE='+00:00' */;
15 • /*140214 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
16 • /*140214 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
17 • /*140214 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
18 • /*140214 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;
19
20 --
21 -- Table structure for table `admin`
22 --
23
24 • DROP TABLE IF EXISTS `admin`;
25 • /*140101 SET @saved_cs_client      = @@character_set_client */;
26 • /*140101 SET character_set_client = utf8 */;
27 • CREATE TABLE `admin` (
28     `adminID` varchar(60) NOT NULL,
29     `adminPassword` varchar(45) NOT NULL,
30     `adminName` varchar(45) NOT NULL,
31     `adminSurname` varchar(45) NOT NULL,
32     `attendance` int(5) NOT NULL
33 ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```
- Output:** Shows the status of the loaded script file.
- Information:** Displays "No object selected".
- Bottom Status Bar:** Shows the path "Loaded SQL script file 'C:\Users\GiG\Documents\3rd Year Heriot Watt\Semester 2\Projects\Software Engineering Project\Final Sysstm\Database\database.v5\database.sql'".

Step 14

When the script runs, multiple green ticks will appear in the output box, this indicates that the database has been successfully created

The screenshot shows the MySQL Workbench interface with the following details:

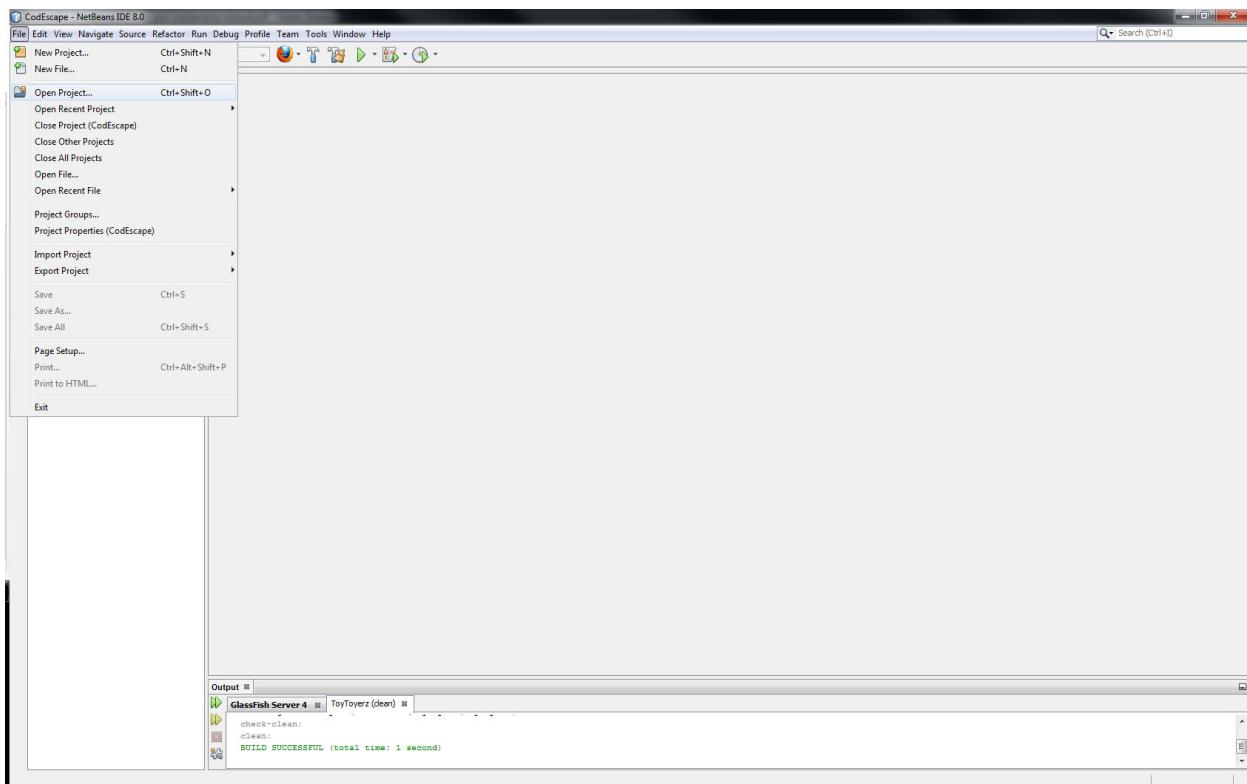
- Navigator:** Shows the current connection is "SystemConnection" and the schema is "MySQL Model (database v5.mwb)".
- Query Editor:** Contains a SQL script for creating a database named "toyoyerz". The script includes various MySQL commands such as `CREATE DATABASE`, `SET character_set_client`, `LOCK TABLES`, `ALTER TABLE`, and `CREATE TABLE` for a table named "assembly".
- Output:** A table showing the execution results of the commands. The table has columns: Action, Time, Action, Message, and Duration / Fetch.

Action	Time	Action	Message	Duration / Fetch
298	03:42:18	/140014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECK...	0 row(s) affected	0.000 sec
299	03:42:18	/140014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS /	0 row(s) affected	0.000 sec
300	03:42:18	/140101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_C...	0 row(s) affected	0.000 sec
301	03:42:18	/140101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_...	0 row(s) affected	0.015 sec
302	03:42:18	/140101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNE...	0 row(s) affected	0.000 sec
303	03:42:18	/140111 SET SQL_NOTES=@OLD_SQL_NOTES /	0 row(s) affected	0.000 sec

Running the System

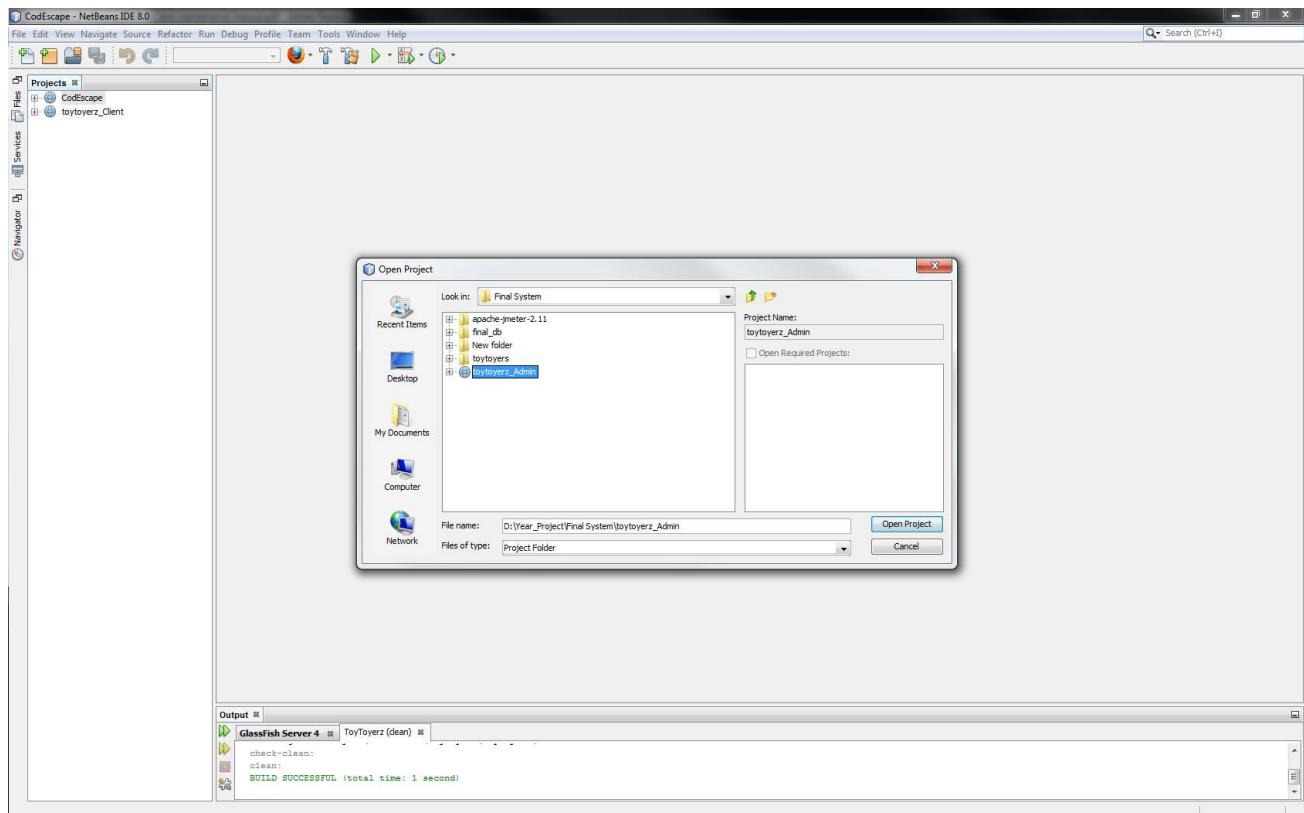
Step 1

Open Netbeans, click on File, then open project



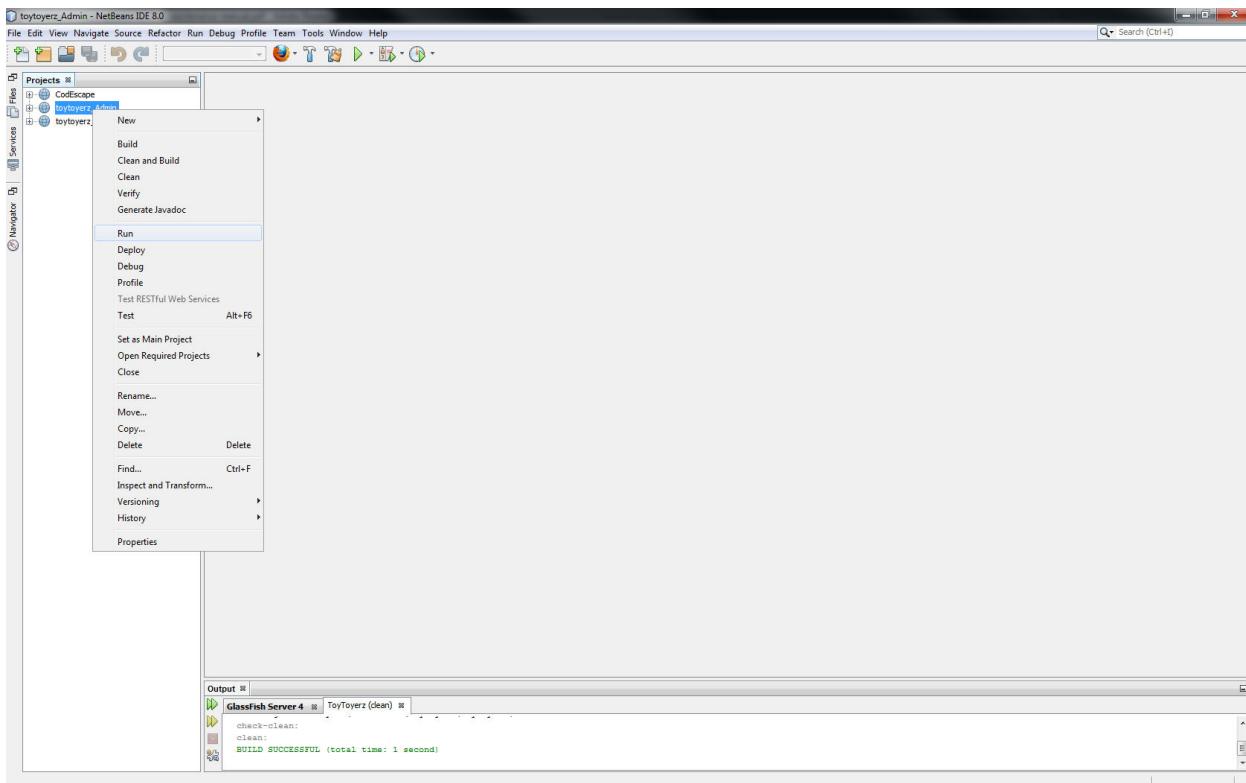
Step 2

Locate the toytoyers project file and click open project.



Step 3

When the project is in loaded onto the workbench, right click it and click “Run”, wait a few moments and the system will then be active.



Step 4

In order to access the system, enter the following URL on your internet browser
http://localhost:8080/toytoyerz_final/login.jsp and press enter. The website will then appear, the following image denotes that.



System Database Backup

When the system is finally deployed, it is recommended that system administrators backup the database.sql file in case of the primary one undergoes any form of misfortune.



ToyToyerz

Client Beta

Group 1:

Tejas Dwarkaram – H00182776
Nelio Lucas – H00182777
Ndumiso Mkhatshwa – H00182874
Khethiwe Ngwenya – H00182866
Sabelo Mabuza – Pending



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Introduction

Purpose

The purpose of this document is to demonstrate the beta version for the client side interface of the ToyToyerz management system.

Scope

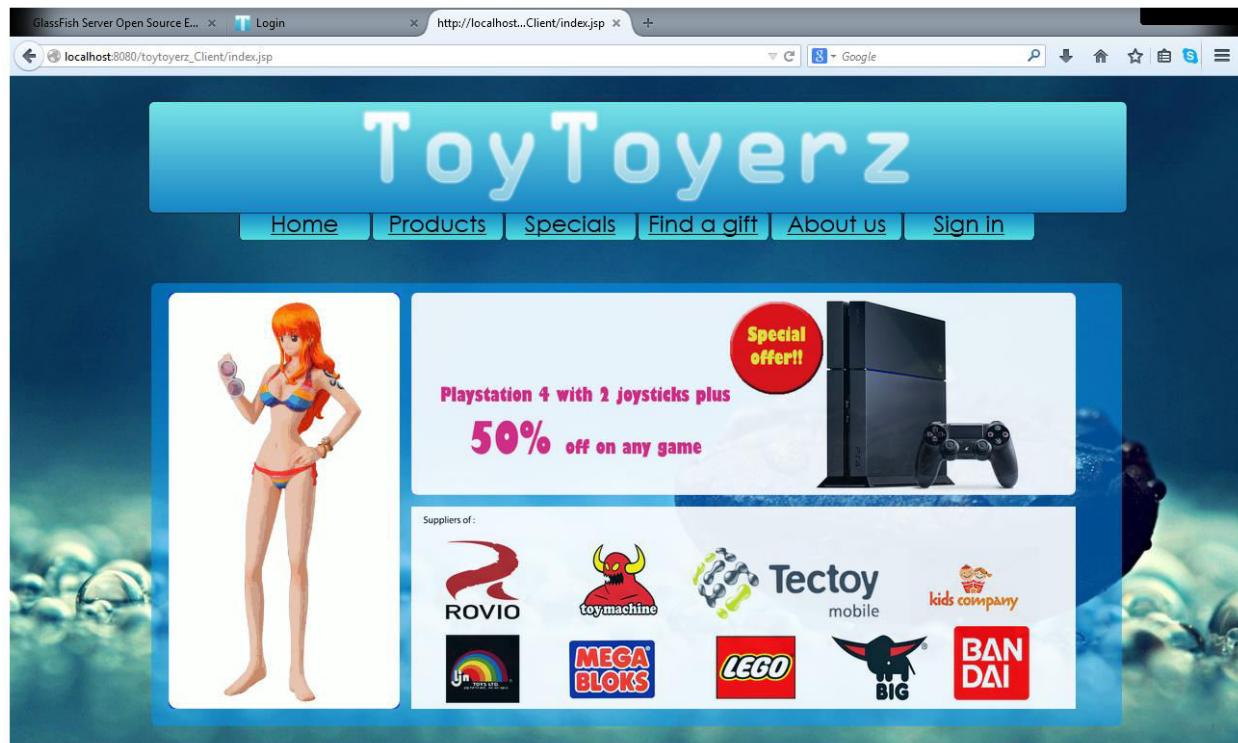
The aim of this document is to show a few working functions of the beta version of the toytoyers management system client side, these functions being:

- Signing in
- Registering

Main page

Figure 1.1 illustrates the main page for the client interface

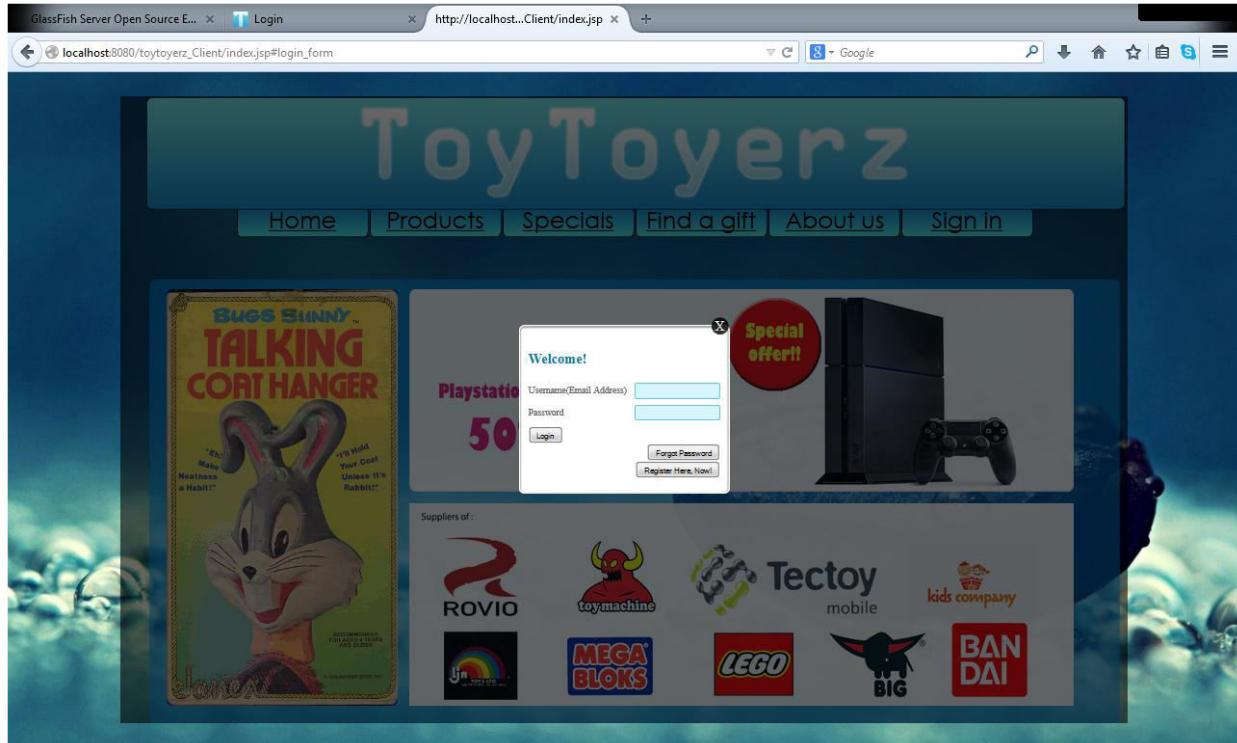
Figure 1.1



Signing in

Figure 1.2 depicts the signing in pop up box that is displayed when “Sign in is clicked”

Figure 1.2



Registering

Figure 1.3 depicts the registration page that is accessed from the sign in pop up box

Figure 1.3

The screenshot shows a web browser window with the URL http://localhost:8080/toytoyerz_Client/index.jsp#register. The page has a dark blue background featuring a large 'ToyToyerz' logo at the top. Below it, there are images of a dollhouse, a PlayStation console, and a toy store interior. A navigation bar with 'Home', 'About us', and 'Sign in' buttons is visible. A central modal dialog box titled 'ToyToyerz™ - Registration' contains various input fields for company information:

Company Name:	<input type="text"/>
Company Address:	<input type="text"/>
Contact Name:	<input type="text"/>
Company Surname:	<input type="text"/>
Telephone:	<input type="text"/> 10 Digit Telephone Number
Email Address:	<input type="text"/>
Account Number:	<input type="text"/>
Swift Code/CSV:	<input type="text"/>
VAT Number:	<input type="text"/>
Fax Number:	<input type="text"/> 10 Digit Fax Number
Tax No:	<input type="text"/>
Password:	<input type="password"/> More than 8 characters
Confirm Password:	<input type="password"/>

At the bottom of the dialog are 'Sign Up', 'Reset', and 'Back to index page' buttons.



ToyToyerz

Project Evaluation

Group 1:

Tejas Dwarkaram – H00182776
Nelio Lucas – H00182777
Ndumiso Mkhatshwa – H00182874
Khethiwe Ngwenya – H00182866
Sabelo Mabuza – Pending



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Project Evaluation

Introduction

Purpose

The purpose of this document is to serve as evaluation of the project as a whole. It will be covering how the team worked together, as well as the strengths and weaknesses of the project as a whole. It will also discuss what we could have done better.

Scope

In this document the group's contribution to the project, as well as how they performed in terms of meeting goals, will be outlined.



Group Contribution

The group consisted of five members:

- Tejas Dwarkaram
- Nelio Lucas
- Khethiwe Ngwenya
- Ndumiso Mkhatshwa (No longer part of the team)
- Sabelo Mabuza (No longer part of the team)

Each member was assigned roles through the development of the project, and below is a layout of who did what in terms of the responsibilities throughout the project

Deliverable 1

- CV's – All
- Project Plan – Nelio Lucas, Tejas Dwarkaram
- Risk Management – Nelio Lucas
- User Requirement Document – Tejas Dwarkaram
- Costing – Tejas Dwarkaram

Deliverable 2

- Implementation Document – Tejas Dwarkaram
- Evaluation Document – Tejas Dwarkaram
- Design Document (Including all UML) – Tejas Dwarkaram, Nelio Lucas

Deliverable 3

- Implementation Document – Tejas Dwarkaram, Nelio Lucas
- Evaluation Document – Tejas Dwarkaram
- Design Document – Tejas Dwarkaram, Nelio Lucas

Deliverable 4

- Final Admin Website – Tejas Dwarkaram
- Final Client Website – Nelio Lucas, Tejas Dwarkaram
- Project Diary – Tejas Dwarkaram
- Implementation Report – Tejas Dwarkaram
- Project Costing – Tejas Dwarkaram
- Requirements Specification – Tejas Dwarkaram
- Risks Document – Nelio Lucas
- Product Evaluation – Tejas Dwarkaram
- User Guide – Nelio Lucas, Tejas Dwarkaram
- Operations Guide – Nelio Lucas, Tejas Dwarkaram
- Installation and Maintenance guide – Nelio Lucas, Tejas Dwarkaram
- Evaluation Report – Tejas Dwarkaram
- Testing – Nelio Lucas, Tejas Dwarkaram



Group Collaboration

This group collaboration is being discussed by myself, the group leader, Mr Tejas Dwarkaram.

The overall collaboration of the team was appalling. From the initiation of the project, there were difficulties arising in terms of members doing work that was requested. Mr Nelio Lucas, to be of note, was the only member of my team that has assisted in the completion of most of the system.

The skill sets of the members of my team were minute. Mr Lucas, had skills in database management (in terms of MSSQL as well as MySQL). Tejas Dwarkaram, performed most of the work, from documentation, to actual coding and implementation of a possible system with the help of Mr Lucas. The rest of the members of the project, were disinterested, and declined to perform any tasks that were given to them. It is important to note, that at a 3rd Year level, most of the members (Mr Lucas aside), lacked all of the required skills for this project. Tutorials were issued to all of the members to complete (HTML 5, CSS and JavaScripting), and only Mr Lucas completed them, and was thus able to assist in the completion of the system.

Mr Lucas made it a point to be scribe at most meetings, whilst I (Tejas Dwarkaram), noted down important information that was being discussed with the client.

2 Members (Ndumiso Mkhatshwa and Sabelo Mabuza) of my group were removed, due to non-attendance as well as a lack of co-operation in the group.

Communication between the members that were working on the system (Nelio Lucas, and Tejas Dwarkaram) was performed via the use of:

- Skype
- Email
- Text communication
- Telephone

Despite the lack of a vast majority of skill sets, and project having to be completed by 2 individuals, we still did manage to meet all of the required deadlines for the deliverables, as well as produce a functioning system for the ToyToyerz Manufacturing Company. It was a difficult feat to keep accurately to the project plan that was drawn up at the beginning of the project, as the tasks were now being distributed over 2 individuals, but we still did manage to complete most of the functionality of the system before it was due.



Future Developments

Due to time constraints, other commitments, and also the lack of able-bodied members, we did manage to meet all of the requirements as put forward by the client. However, given the correct initiation of the project, with only 2 members on hand we would have been able to perform more effectively without having to constantly wait for members to bring up excuses and not produce what was required.