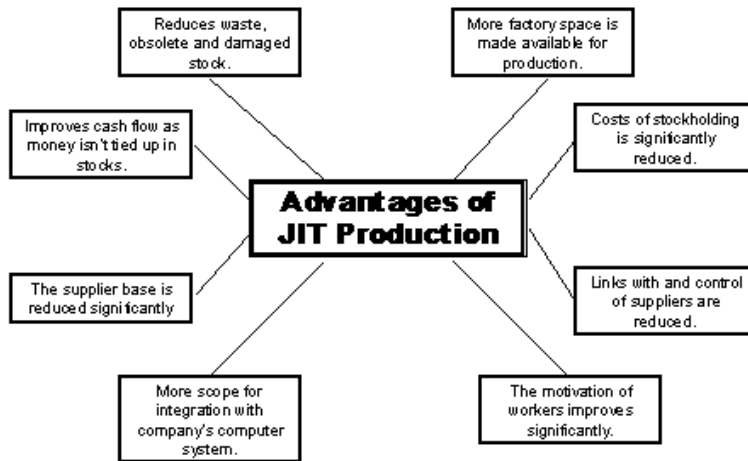


Project : Android App with Database Map

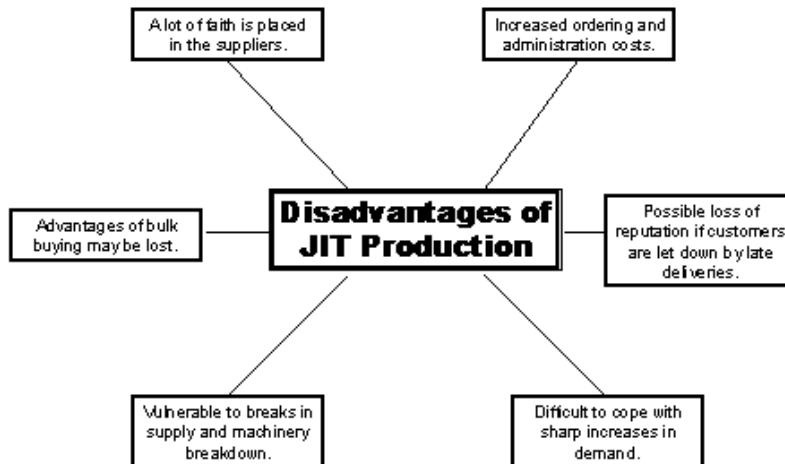


Allan Burris
 Jason Arango
 CPET 499
 10/28/2014

JIT: Just-In-Time



JIT: Just-In-Time



Mobile Application Data

- ▶ Facts or information used usually to calculate, analyze, or plan something.
- ▶ Stored in SQLite database and accessed by the app such as a residential address.
- ▶ Images stored in cache for app UI.

Mobile Data Requirements

- ▶ Requirements are needs for the app to perform for successful completion.
 - ▶ Database entries such as name and address.
 - ▶ GPS coordinates used for geolocation of address.

Mobile Data Modeling

- ▶ The formalization and documentation of existing processes and events that occur during application software design and development.
- ▶ Diagram or flowchart that illustrates the relationships between data.

Mobile Data Structures

- ▶ Way of organizing data in a computer so that it can be used efficiently.
- ▶ Expose their data and have no meaningful functions.

App Data Stores

- ▶ Repository of a set of data objects.
- ▶ Objects are modelled using classes defined in a database schema.
- ▶ A data store is a general concept that includes not just repositories like databases, but also simpler store types such as flat files etc.
- ▶ SQLite database used for Android app.

App Data Access

- ▶ Refers to software and activities related to storing, retrieving, or acting on data housed in a database or other repository.
- ▶ Two fundamental types of data access exist:
 - ▶ sequential access (as in magnetic tape, for example)
 - ▶ random access (as in indexed media)
- ▶ SQLite database stored in flash memory on device.

App Query Processing and Data Presentation

- ▶ A query is when something requests data from a database.
- ▶ Database returns the data requested
- ▶ An object translates the data into something useful
- ▶ Data is presented making a data presentation

App Business Process Modeling and Web Services

- ▶ Business process modeling in systems engineering is the process of representing processes of an enterprise.
- ▶ The current process is then analyzed or improved.
- ▶ Web services are a software function provided at a network address over the internet protocol backbone with the service always on.
- ▶ Web services describe a standard of integrating applications using XML, JSON, and HTML.

App Service Oriented Architecture

- ▶ Example for organizing and utilizing distributed capabilities that may be under the control of different ownership domains.
- ▶ Provides a uniform mean to offer, discover, interact with, and use capabilities
- ▶ Produces desired effects consistent with measurable expectations.

App Cloud Computing

- ▶ Group of servers are networked to allow central data storage and online access to data and services.
- ▶ Access Google Maps from the cloud to geolocate addresses.

Companies that offer Related Technologies

- ▶ Google
 - ▶ Google Maps API
 - ▶ Google Geocoding API
 - ▶ Android Studio
- ▶ SQLite
- ▶ Batchgeo
- ▶ ZeeMaps

App Risk Matrix

A	B	C	D	E	F	G	H	I	J
				1 Insignificant: minor problem easily handled by day to day processes	2 Minor: some disruption possible	3 Moderate: significant time / resources required	4 Major: operations severely damaged	5 Catastrophic: project survival is at risk	
	5 Almost Certain: >90% chance	Likelihood	5						
	4 High: 50 - 90% chance		4	Server integration					
	3 Moderate: 10 - 50% chance		3						
	2 Unlikely: 3 - 10% chance		2	Acquire API key	Work outside academics			Integration of API's	
	1 Rare: <3% chance		1	Hardware incompatibility					
				1	2	3	4	5	
				Severity					

App Project Tasks and Milestones

Android App with Database Map

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Tasks

2

Name	Begin date	End date
Project Start <i>First day of class and Project Selection Report is talked about. Senior Design Project is officially started.</i>	8/25/14	8/25/14
Project Selection Report <i>Project selection report was filled out and senior design project was chosen. My project is an Android App that maps database data that is stored on a server. The server may be included but most likely just using a local database stored on the device as explained later.</i>	8/25/14	9/8/14
Research for Project <i>The research for the project is going to take place during the first semester and during Christmas break. This time can include starting on the design of the project.</i>	8/25/14	1/5/15
Met with Advisor <i>Met with Michelle Parker and discussed concerns, risks, and scope of the project. We also talked about using Windows and doing an Android App as well.</i>	9/8/14	9/8/14
Project Charter <i>The Project Charter was created to get a birds eye view of the project and proposing it to the faculty here at IPFW.</i>	9/8/14	9/22/14
Met with Advisor <i>Met with Paul Lin to discuss creating an Android app for my project. We discussed many ideas as well as using SQLite for a database on the device.</i>	9/22/14	9/22/14
Met with Advisor <i>Met with Michelle Parker to discuss the Project Charter. She is my project faculty advisor for the project and we went over various things including cutting out a server altogether and just using SQLite.</i>	10/1/14	10/1/14
Revise Charter <i>Charter was submitted and graded. The Charter needs revised so final approval can take place and the project can go ahead.</i>	9/22/14	10/20/14
Draft Project Requirements <i>The project will have to include specific requirements so the prototype can do said requirements and the project can be completed successfully.</i>	10/20/14	10/27/14
Draft Project System Architecture <i>System Architecture design will be useful in giving a visual design and layout of the project. This will be helpful in making sure there is no missed steps and the project can be completed.</i>	10/27/14	11/3/14
Draft Project Risks <i>The Risks are important in showing that the project can have obstacles standing in the way of completing a successful project on time.</i>	11/3/14	11/10/14

Draft Project Plan	11/10/14	11/28/14
<i>Project plan is what is needed to start executing the project. Without the plan, the project can't go on and be completed.</i>		
Project Plan Presentation	12/1/14	12/15/14
<i>This is the week I will make a presentation to my 490 class on the Project Plan that I have created.</i>		
Project Development Evidence	12/1/14	12/15/14
<i>This is a report that is required at the end of the first semester for the Senior Design project.</i>		

Android App with Database Map

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Tasks

3

Name	Begin date	End date
Meet with Advisor	12/3/14	12/3/14
<i>Discuss my progress before break and also ask questions.</i>		
Software Acquired	1/5/15	1/5/15
<i>I will have all the software needed to complete the project. The software will be loaded on my laptop.</i>		
Database Design Completed	1/12/15	1/12/15
<i>The design of the database such as the layout of the tables and the type of information that will be included to complete the database.</i>		
Meet with Advisor	1/14/15	1/14/15
<i>Discuss my progress after break and make sure all that I've done with the project so far is going to fulfill the project requirements.</i>		
Adding Data to Database	1/14/15	1/26/15
<i>Creating the database, creating tables, and adding data to the rows and columns on the tables.</i>		
SQLite Database Completed	1/26/15	1/26/15
<i>The database has all of the data needed and is ready to be integrated with the app.</i>		
App Software Coding Design Completed	2/2/15	2/2/15
<i>The design of the coding such as UML diagrams and pseudocode have been completed.</i>		
Software Coding	2/2/15	3/9/15
<i>Creating the software code for the UI in the Android App as well as the script to create Geolocation coordinates from addresses so the Google Map API will be used to can map locations.</i>		

App Software Code Completed	3/9/15	3/9/15
<i>The UI and all of the functionality of the App is done other than the data needed from the database.</i>		
Meet with Advisor	3/11/15	3/11/15
<i>Checking in with the advisor to make sure everything is going good with the project.</i>		
App Code Testing	3/11/15	3/23/15
<i>Testing code for the UI and the different design elements of the App to make sure they work.</i>		
App Software Testing Completed	3/23/15	3/23/15
<i>Testing of how the UI works without the database to make sure everything functions correctly. Some data will be added into the code for testing.</i>		
Coding to Integrate App to Database	3/23/15	4/8/15
<i>This will be just more code in the Android Development Software to interface with SQLite on the device.</i>		
Testing Integration	4/8/15	4/20/15
<i>This time will be used to make sure the database is able to provide data to the App and also the App being able to change data in the database. Testing of the database and app will also take place to make sure everything is working properly.</i>		
Database and App Integration Completed	4/20/15	4/20/15
<i>The App is taking the data from the database and using it as well as updating data in the database.</i>		

Android App with Database Map

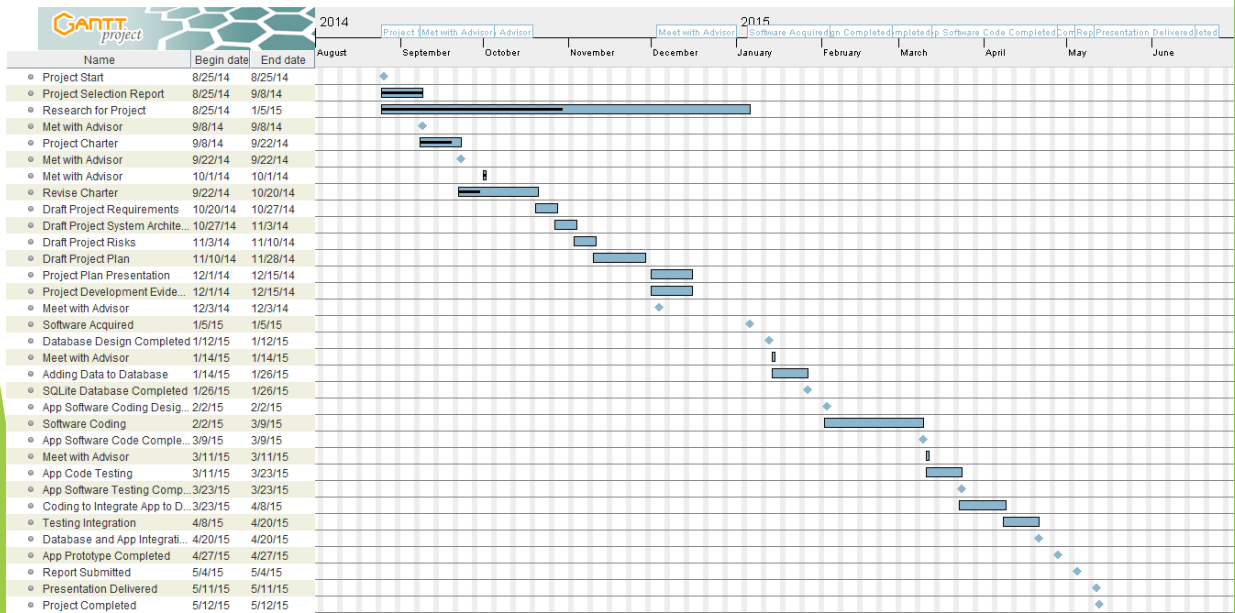
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Tasks

4

Name	Begin date	End date
App Prototype Completed	4/27/15	4/27/15
<i>The App is finished along with a test database to use on an Android device.</i>		
Report Submitted	5/4/15	5/4/15
<i>The report was created to reflect on the work that took place over the semester.</i>		
Presentation Delivered	5/11/15	5/11/15
<i>The presentation shows that the prototype works according to the requirements and scope created.</i>		
Project Completed	5/12/15	5/12/15
<i>Project is finished.</i>		

App Project Gantt Chart



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