

Date	Time	Duration (hours)	Stage	Notes
04/02/2020	13:00:00	2	Planning	Brainstorming app ideas and concepts, after considering some possibilities, i chose to do a weekly rota generator for part-time work Core Functionalities: -Group membership -Role creation -Shift submission -Rota generation -Rota planning view -Automated selection
07/02/2020	13:30:00	1	Planning	Refining ideas by doing a 30 second pitching session to a group of people, also gained some feedback on possible improvements: -leave/sick off day, etc. functionality -calendar integration -notifications
12/02/2020	16:30:00	1	Planning	Research into competitor apps for timetable generation: -Work Shift Calendar -MobileRota -RotaCloud -Shift Work Calendar General remarks: Most apps on the market are similar in nature that they are not collaborative online and still manually generated. This means my app will have more advantage if i am able to implement collaborative creation and automated generation.
12/02/2020	11:30:00	3	Planning	Research into tools and platforms for app development Considered: -Android - chosen for easier development since I don't have an iOs device and a larger market -iOs -Java (Android Studio) -Kotlin (Android Studio) - chosen based on multiple articles encouraging future app development with Kotlin as well as shorter syntax benefits -Swift (Apple) -Reactjs (Expo)
14/02/2020	11:30:00	3	Planning	Learning Kotlin syntax, loops, and functions online through Stackoverflow and the developer document
14/02/2020	14:30:00	5	Planning	learning Kotlin app development functions and widgets, namely through websites such as Medium and YouTube Key concepts -Fragments -Activities
15/02/2020	11:30:00	3	Planning	Research into database solutions Considered: -PostgreSQL -Heroku -Amazon AWS -Firebase Factors explored: -Pricing -Limitations (transaction speed and record limit) -Scalability -Familiarity -Popularity in app development Chosen platform: firebase chosen for seamless and easy integration with android studio being part of Google's ecosystem. Although I am unfamiliar with it the popularity in development and the resources available online are vast and promising. The free tier is also not as limiting as platforms such as Heroku. Is the only one that is noSQL, which I have never used before.
16/02/2020	12:00:00	4	Planning	Learning firebase with Kotlin integration through the firebase documentation website with example app and data
21/02/2020	11:00:00	5	Design	Designing the front-end app design with a main bottom navigation style
26/02/2020	14:30:00	3	Design	Determining which design space is best suited for displaying the rota. I have considered different variations of displaying a week timeline and decided to imitate the paper document of my past waitering restaurant experience This is due to multiple restaurants also following the same format, thus a familiar format will appeal to my target users
28/02/2020	12:30:00	5	Design	Created moodboard, storyboard, and footboard for the app based on initial concepts
28/02/2020	13:00:00	2	Design	Design the application logo based on mood board colors and theme
29/02/2020	12:00:00	2	Design	Designing the firebase backend data structure through collections and documents
08/03/2020	11:30:00	3	Design	Created personas and user studies to investigate the requirements of the application

				Generate a list of initial requirements -Users as split into manager and employee categories -Managers have more control over employees -Employees only submit their desired shift times for next week -Managers can manage the roles that employees can take -Managers can modify the rota directly -Managers can promote other users to the manager role -Each role is color coded to promote categorization
13/03/2020	12:30:00	1	Design	
14/03/2020	14:00:00	3	Implementation	Implemented a skeletal app framework that allows for basic navigation with bottom navigation bar fragment inflating
15/03/2020	16:30:00	4	Implementation	Implementing login, register, and forgot password activities with firebase integration
18/03/2020	15:30:00	1	Implementation	Added app logo into the ic_launcher locations
20/03/2020	16:00:00	2	Implementation	Added user information on register: user id, user type, group code
21/03/2020	14:00:00	2	Implementation	Implemented unique 6 digit group code generation with firebase validation and copy to clipboard functionality
22/03/2020	14:00:00	6	Implementation	Implemented group information by group code as key to view list of employees, list of roles, and list of shifts This process ran into technical difficulties since the data structure that i set up with firebase was incapable of doing what I wanted. I ended up needing to rework the main back-end structure in order to be able to continue with my implementation
25/03/2020	14:00:00	1	Implementation	Implemented logout and leave group with backend update
10/04/2020	11:00:00	5	Implementation	Implemented recyclerview with adapter that reads the list of employees in the group and displays the name and position of each
12/04/2020	13:00:00	4	Implementation	Implemented add role functionality that uses dialog fragments to gain user input, which opens a time picker dialog and color picker dialog to select the time and color variables
17/04/2020	16:30:00	1	Implementation	Implemented recyclerview with adapter for the list of roles, changing the color of each textview based on attribute from firebase
26/04/2020	12:00:00	2	Implementation	Integrated firebase update to add role fragment and allowed roles to be edited by clicking on the recycler view item
01/05/2020	13:00:00	1	Implementation	Developed add shifts functionality that creates a dialog fragment for input using 2 custom spinners populated from firebase group attributes
02/05/2020	12:30:00	3	Implementation	Reworked firebase loading implementation to load in continuous order rather than asynchronous, in addition reloads the local cached db on every server update
03/05/2020	15:00:00	1	Implementation	Implemented roles recyclerview into shifts fragment and next fragment to act as a legend to the rota table
03/05/2020	17:00:00	1.5	Implementation	Added roles id attribute to role data class in order to handle deleting efficiently, this attribute was previously missing as firebase .add function auto generates the key server-side only
03/05/2020	16:00:00	0.5	Implementation	Implemented delete shift functionality through a modified shift dialog fragment that only takes date as parameter to delete based on date
06/05/2020	16:30:00	3	Implementation	Developed functions that aggregated cached firebase data in order to display the name of the user that have added a shift on each day of the upcoming week
06/05/2020	13:30:00	3	Implementation	Implemented color coding on the rota display This is done by extending the display methods to hold spannable strings that allow for specific texts in a single textview to have custom formats
10/05/2020	11:30:00	0.5	Implementation	Converted rota display for next week to current week
10/05/2020	16:30:00	0.5	Implementation	Final touch up on design aspects, such as margin changes, string resource refactoring, project package refactoring, etc.
13/05/2020	15:00:00	1	Maintenance	User testing the application for bugs in the user interface side, not the database Fixing minor issues by restricting functions on conditions, such as: -unable to leave group if the user is the owner -unable to delete a shift on a day the user has not added a shift for -unable to leave fields blank -unable to continue without reloading the database
17/05/2020	12:30:00	3	Documentation	Writing self reflective essay, formatting design log, and recording demo video
<b>SubTotals</b>				
		22	Planning	
		21	Design	
		45	Implementation	
		1	Maintenance	
		3	Documentation	
<b>92 Total</b>				