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Title: NFL Teams Info (for fantasy football)

Project Summary: An android app that scrapes the web in order to retrieve up to date Team statistic and game rosters from the NFL. Intended to be used by fans who play fantasy football. It will show information like offense and defense stats as well as an official team depth chart for a specified team.
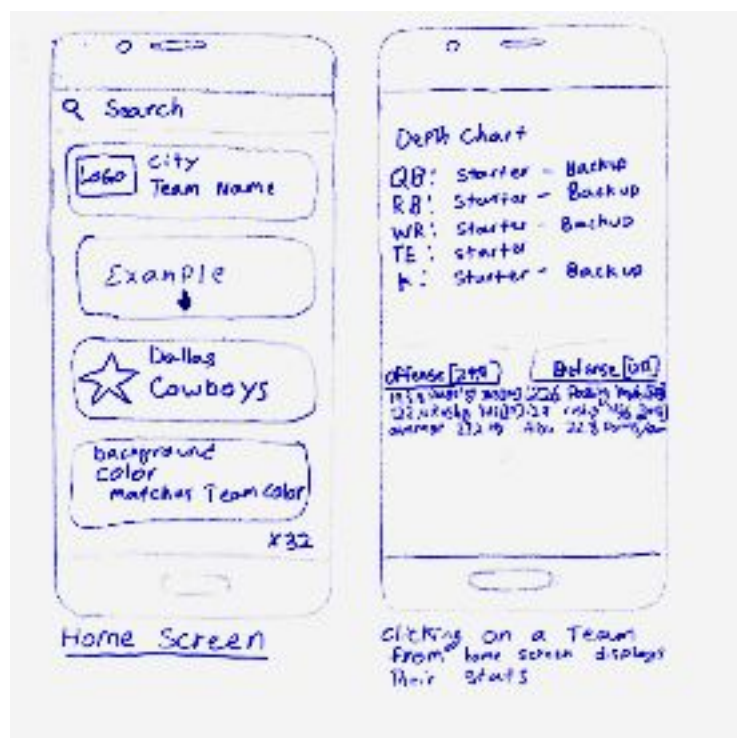
User Requirements

U-01	**Browse teams**	A user can scroll through all 32 NFL teams.
U-02	**Search teams**	A user can search for a specific NFL team .
U-03	**View team**	A user can view an NFL teams stats and depth charts.

Functional Requirements

F-01	**Format / Display teams**	In home page, the system must be able to take JSON data parse it to populate a listview from it and display it to the user. (ie Team name & city, logo, color)
F-02	**Scrape offense/defense**	Using threads and given a web addresses as argument, Scrape the NFL address and retrieve key stats for the offense and defense of a specified team.
F-03	**Scrape depth chart**	Using threads and given a web addresses of a specific NFL team from JSON file, scrape the address to get the team's unofficial depth chart, containing all starters and backup.

UI Mockups

Class Diagram

AppCompatActivity

// Android Activity class

Positions

+ playerPos: String
+Players: List<String>

+FormatString(pos:String):String

TeamActivity

+statsTable : Android_TableView
+teamTable : Android_TableView
-mDepthChart: List<Positions>
-statLinks : List<String>
-teamSite: String

+getTeam(): void
+getOffense(): void
+getDefense(): void

Lists

HomeActivity

-teamList: List<TeamModel>
-recycleView : RecycleView
-teamAdapter: TeamAdapter

onCreate(): void
+ getJSON(key:String) : ArrayList<String>
+ onCreateOptionsMenu(menu: Menu) : Boolean
+ OnQueryTextChange(newText : String): Boolean

Clicking on recycle view
starts team Activity

TeamModel

-teamCode: String
-teamCity: String
-teamName: String
-teamWebsite: String
-teamFullName: String
-teamBackgroundColor: String
-logo: int

+TeamModel()
+getters() // class has getters for each variable
+getLogoRes(teamName:String) : int

Lists

Creates TeamAdpter using teamList

RecycleView

// Android View class

TeamAdapter

mContex : AppCompatActivity
mTeamList: List<TeamModel>

+TeamAdapter(contex: AppCompatActivity, team: List<TeamModel>)
+onCreateViewHolder() : TeamViewHolder
+onBindViewHolder(): void
+ getItemCount(): int

Maps TeamModel to its View

TeamViewHolder

+imageView : ImageView
+ team_city : TextView
+scraperLink: String

+TeamViewHolder()