Project Plan
Humana Kids
The Capstone Experience

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Functional Specifications

• Android App
  ▪ Provide children an unobtrusive environment that promotes healthy living

• Web App for Parents
  ▪ To see child’s survey responses and healthy tips
  ▪ Display health trends of child

• Web App for Admins
  ▪ To see usage statistics of Humana Kids community
Design Specifications

- **Android App**
  - Surveys, tips, & challenges appear during usage
  - App runs in background

- **Web Apps**
  - **Parent**
    - Graphs for parent to visualize child’s health trends
    - Receive health tips and recipes
  - **Humana Admin**
    - Graphs about user trends
Screen Mockup: App Home Screen

![App Home Screen Mockup]
Screen Mockup: Humana Kids Home
Screen Mockup: Locked Mode
Screen Mockup: Survey/Quiz Pop-ups
Screen Mockup: Rewards

Rewards
Great answer! You get 5 coins!

Rewards
You just unlocked the Level 3 badge! Nice job!
Screen Mockup: Blocking

Challenge!
Can you do 25 jumping jacks in 30 seconds? Try it!

Challenge!

Did you do at least 25 jumping jacks?

NO... YES!
Screen Mockup: Child Views

- Top user: topuser1234, 99,999,999
- 2nd: user33423, 50,012,339
- 3rd: veggietales (you!), 20,002,874
- 4th: yummy_1, 13,115,654
- 5th: lovescandy666, 7,888,326
- 6th: iloveexerciselol, 4,932,631
- 7th: apotato, 4,245,868

Badges:
- Rookie Badge: Collect 100 coins
- Intermediate Badge: Collect 500 coins
- Pro Badge: Collect 1000 coins
- All-Pro Badge: Collect 2000 coins
- All-Star Badge: Collect 5000 coins
- Champion Badge: Collect 10000 coins
Screen Mockup: Web App (Parent)
Screen Mockup: Web App (Parent)
Screen Mockup: Web App (Admin)
Screen Mockup: Web App (Admin)
Technical Specifications

• MySQL Server
  ▪ Django API Web Service

• Android ‘Humana Kids’ App
  ▪ HTTP Requests to API
  ▪ Running in Background

• Web Apps
  ▪ Django Web Framework
  ▪ HTTP Requests to API
  ▪ Present data using JavaScript libraries
System Architecture

Humana Kids App

Server

Web Application Server (Humana Employee)

Web Application Server (Parent)
System Components

• Hardware Platforms
  ▪ MySQL server on Ubuntu System

• Software Platforms / Technologies
  ▪ Android (API 21+ Lollipop)
  ▪ Web Apps – Python/Django
  ▪ Database API - Django
Testing

- Android Unit Testing Framework
- Django “unittest” module
- Using sample data for web apps
Risks

• (Incorporation Machine Learning in an efficient way)
  ▪ Humana asked us to use machine learning on the survey responses to give targeted information to the child and parent.
  ▪ Understand how machine learning works and talk to experienced peers about how to use it effectively.
• (Having the Android App run in the background)
  ▪ The app needs to run in the background while prompting the user to take surveys and track the child’s usage.
  ▪ Working on creating notifications and pop-ups while in the background.
• (Getting accurate health trends on the child)
  ▪ The children are ages 6-12 and it is hard to get accurate information from them.
  ▪ Have the parents verify the child’s answers and make the question
• (To allow multiple child accounts per device)
  ▪ Multiple children can use the same device and we need to survey them all.
  ▪ Create an account for each child. Survey them after a period of usage.
Questions?