MICHIGAN STATE UNIVERSITY

Project Plan

Customer App Review Dashboard

The Capstone Experience

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From Students…
…to Professionals

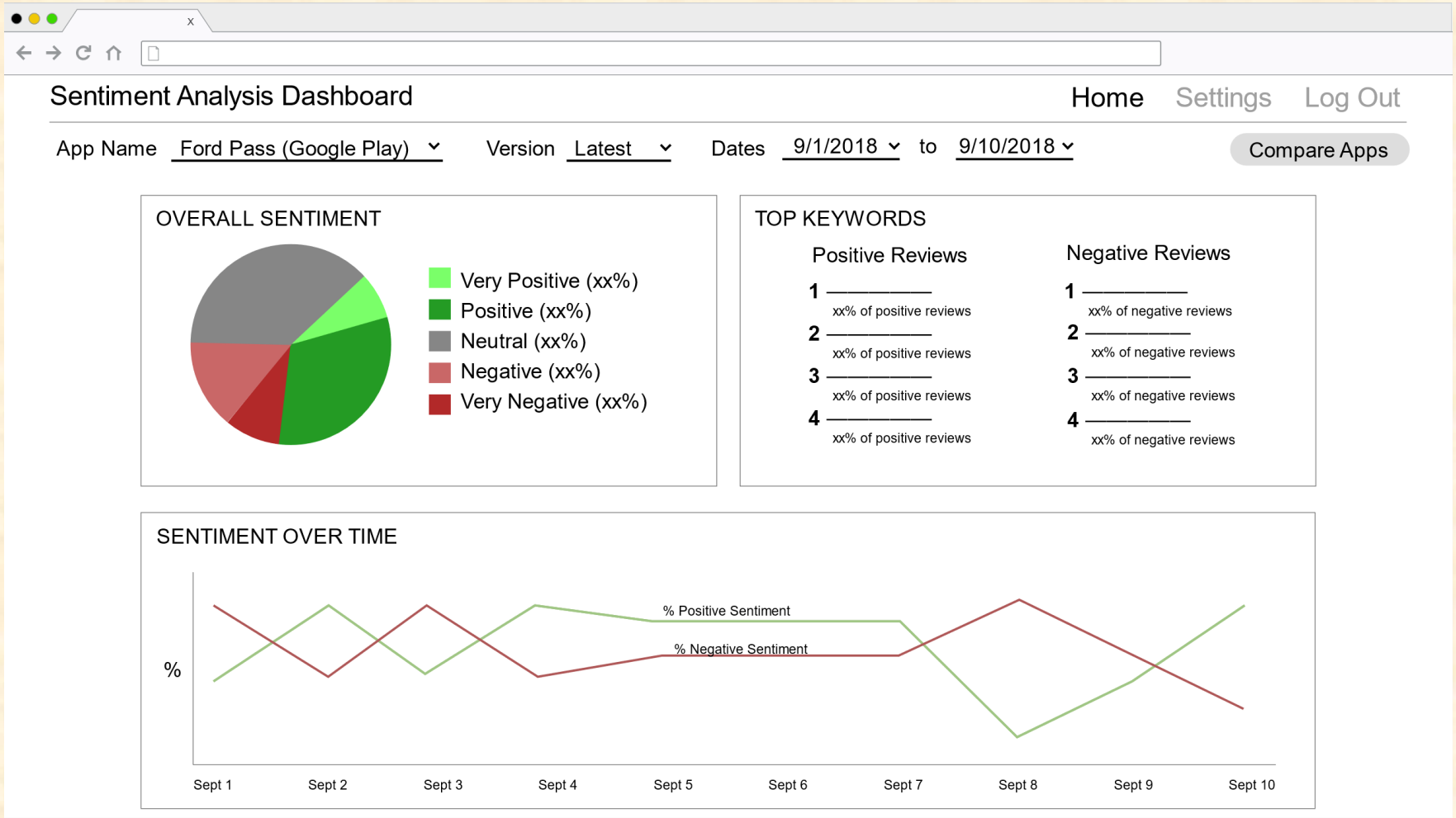
Functional Specifications

- Aggregate and analyze app review sentiment
- Present sentiment data in multiple formats
  - Scheduled Slack Bot reports
  - Web interface with a variety of views
- Compare multiple apps and versions
- Identify repeatedly mentioned app features

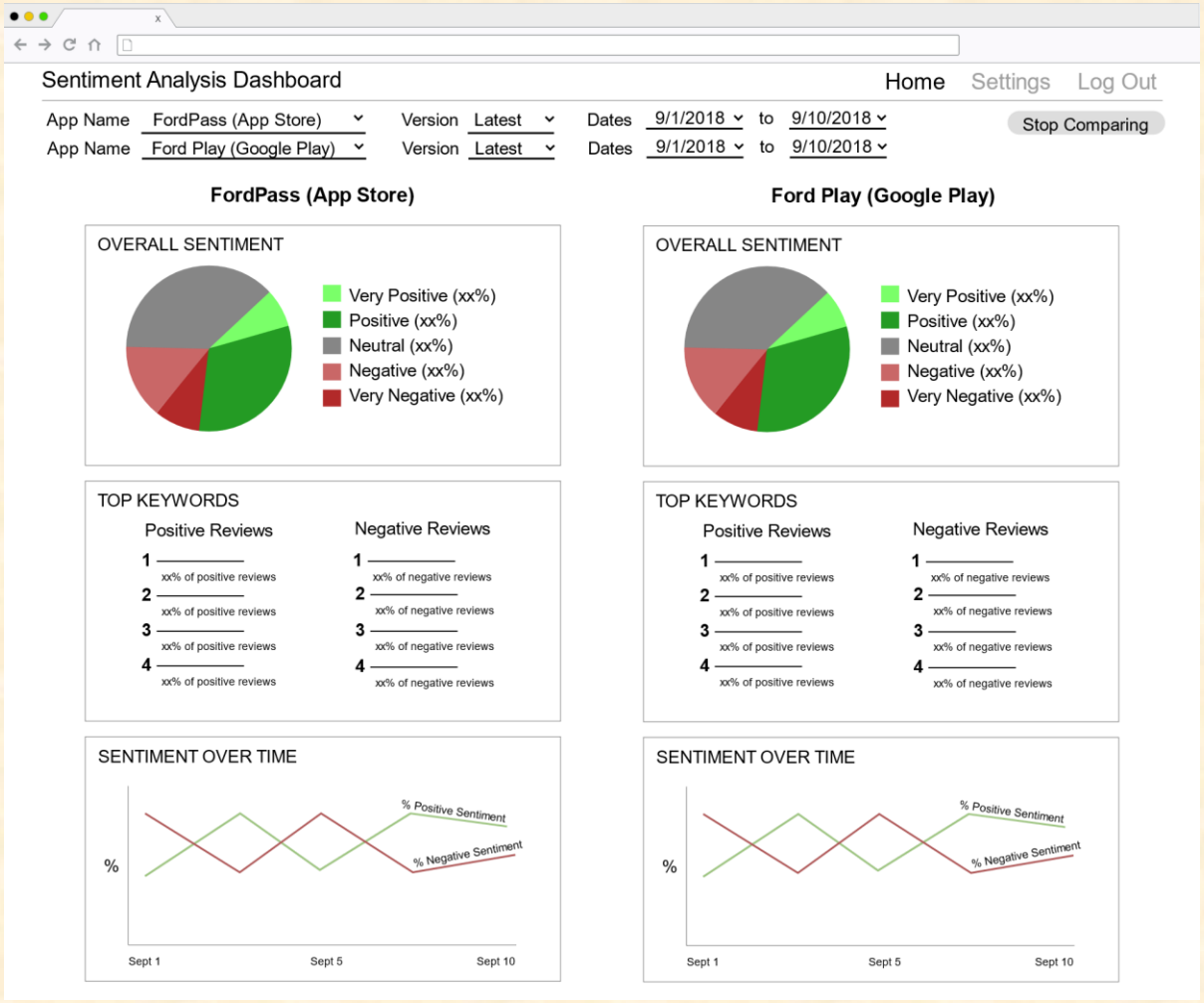
Design Specifications

- Web dashboard
  - Configurable interface allows for viewing statistics of a single app or comparing multiple apps/versions
  - Includes administrative portal for configuring both web interface and Slack Bot
- Slack Bot
  - Automatically outputs app sentiment report on a dedicated channel
  - May be explicitly summoned

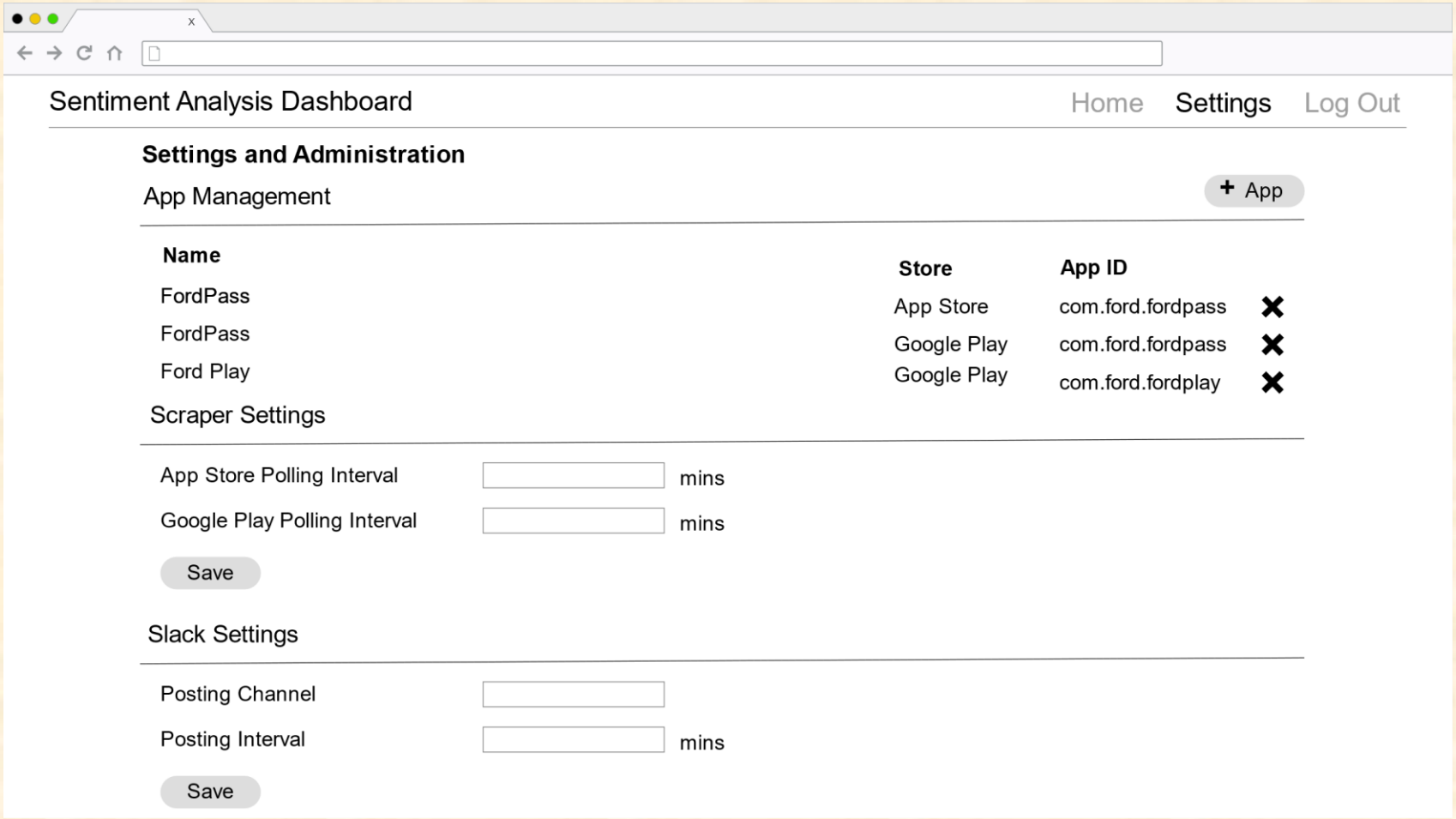
Screen Mockup: Single App Dashboard



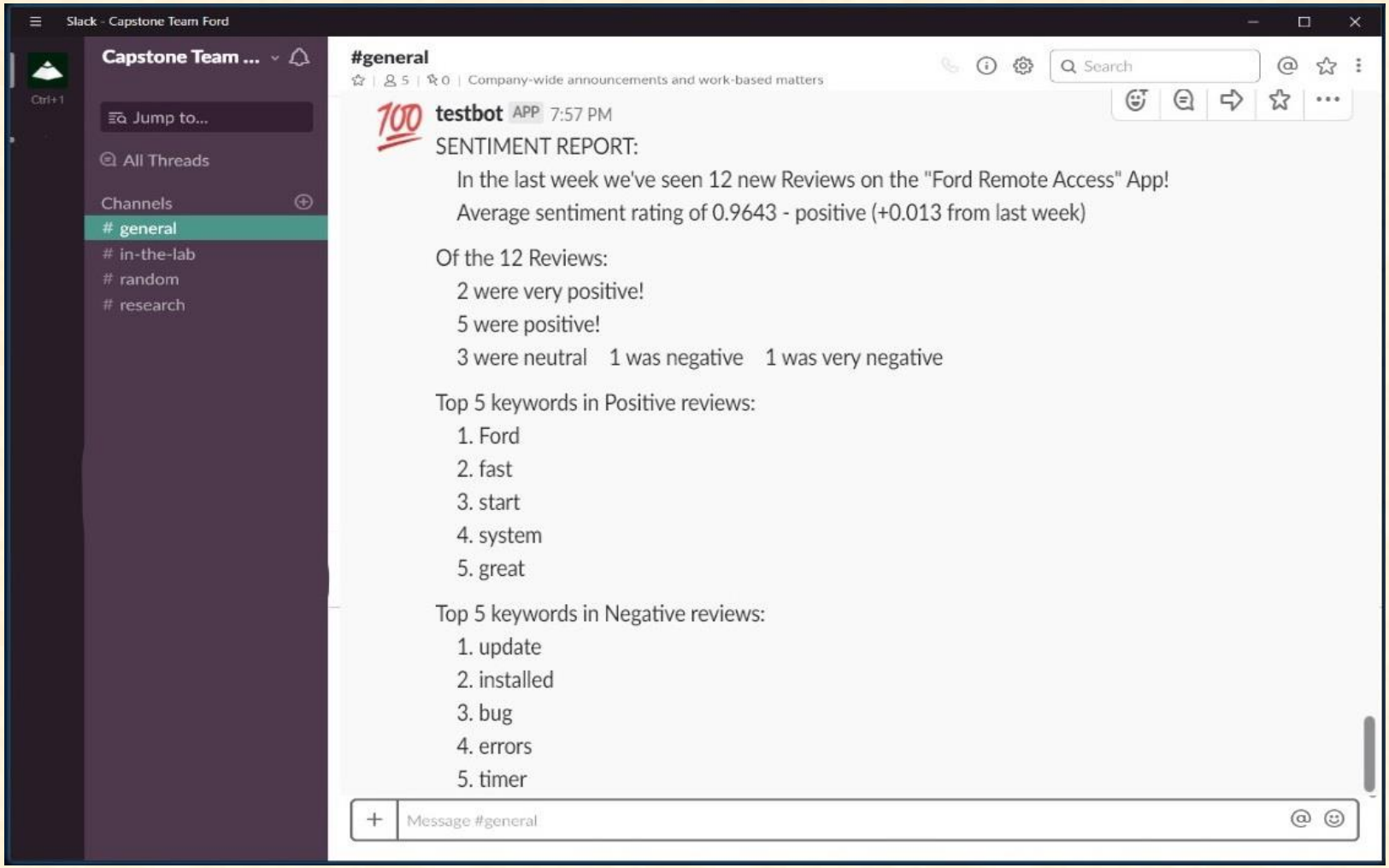
Screen Mockup: App Comparison Dashboard



Screen Mockup: Settings Portal



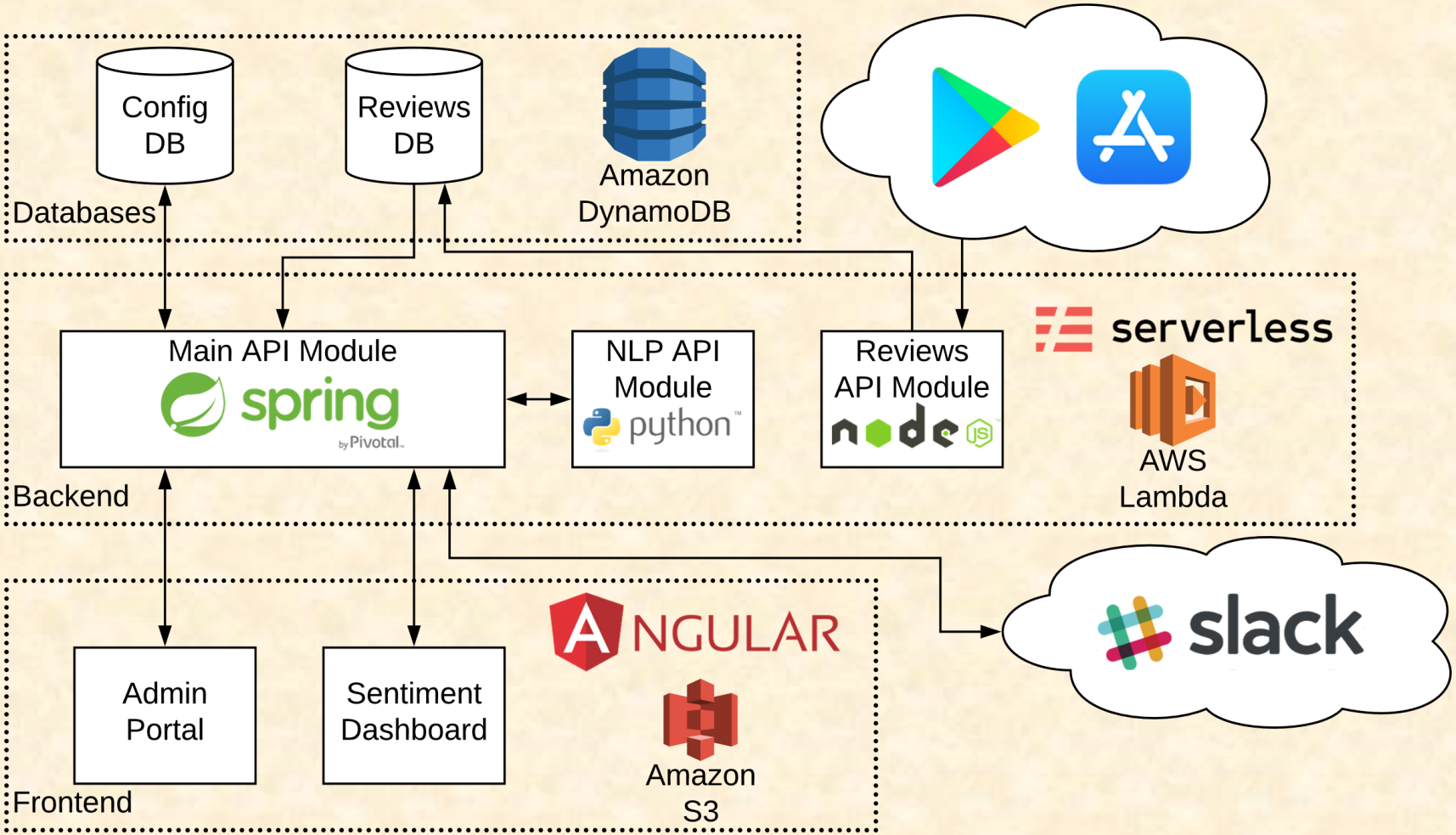
Screen Mockup: Slack Bot Output



Technical Specifications

- Backend
  - Java/Spring API
  - Node.js app store scraping module
  - Python NLTK sentiment analysis module
- Frontend
  - Angular web interface
  - Slack API bot

System Architecture



System Components

- Hardware Platforms
  - AWS Lambda
  - Amazon DynamoDB
  - Amazon S3

System Components

- Software Platforms / Technologies
  - Spring Cloud Function
  - Python Natural Language Toolkit
  - Node.js
  - Angular
  - Slack API
  - Serverless Framework
  - Travis CI

Risks

- Risk 1
  - Description: Inconsistent review data between stores and scraping tools
  - Mitigation: Develop a UI and DB schema that can handle varied information or implement functionality to scraper(s)
- Risk 2
  - Description: Web dashboard user authentication
  - Mitigation: Use a flexible authentication platform that integrates with LDAP (currently looking into Amazon Cognito)
- Risk 3
  - Description: Integrating multiple languages into one backend API
  - Mitigation: Use API Gateway and Lambda to allow isolated modules to communicate
- Risk 4
  - Description: Spring performance with Lambda
  - Mitigation: Increase allocated Lambda resources and test AWS Labs's suggested performance fixes

Questions?