Project Plan
New Customer Service Channel

The Capstone Experience

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Spring 2019
Functional Specifications

• Create a web application to sync with an ongoing phone call that allows the user to navigate/interact a call tree through a visual interface by touch or click of commands on their mobile screen.
• The web application would allow the user to make payments, obtain information about their account, and setup payment services without a phone representative’s help.
• If assistance is needed, the web application would route the phone call to an appropriate representative, with full context transfer.
• Potentially include a chat bot service to support a user faster in the event call volume is high.
Design Specifications

• Offer the customer an option to receive a link routing to the web app via text, after confirming they are on a mobile device.

• The user will not have access to other pages within the web application until proper authentication is provided based on meeting certain requirements.

• After validating the customer, the user will be able to navigate the call tree, allowing them to select and view information about their account, make payments to their bill, etc.

• Keep the client’s phone position on the phone call queue and allow them to reconnect back to a live representative at any time. A button will be placed on every page allowing for the customer to use that feature.
Screen Mockup: Main Menu UI
Screen Mockup: Payment Arrangement
Screen Mockup: View Account Info

Account Info

Account Holder: Capstone Team
Account Number: 9844028756

Payment Info:

- Billed Amount as of 02/10/19: $227.66
- Last Payment Amount: $265.82
- Amount Due: $205.05
- Bi-Weekly Payment: N/A
- Weekly Payment: $35.50

Make Payment

Chat With Agent
Screen Mockup: Make a Payment

Make A Payment

Account Holder: Capstone Team
Account Number: 9844028756
Payment Info: 
- $205.05
  - Due 03/2/19
- Amount Due: $205.05
- Bi-Weekly Payment: N/A
- Weekly Payment: $35.50
  - $35.50
- Due After Next Payment: $169.55

Enter Payment Amount

Account Info

Chat With Agent
Technical Specifications

• Front-end
  ▪ Angular 7
  ▪ Bootstrap 4.2 – can easily scale onto a mobile phone
  ▪ HTML 5, CSS 3, JavaScript, TypeScript
  ▪ Node.js

• Web Services/API services
  ▪ RESTful APIs
    o HTTP request returning JSON
  ▪ Genesys (internal API used for customer journey tracking and will be utilized for the callback functionality)

• Back-end
  ▪ Microsoft SQL Server will be used to manage customer data which is hosted on the server in the capstone lab.
  ▪ ASP.NET Core framework will be used to build the backend for the web application
    o MVC architectural pattern
    o C#
System Architecture

Front End

Web Services / API

HTTP/REST
HTTP/JSON Response

Back End / Server Side

ASP.NET Core
ENTITY FRAMEWORK
C#

SQL
MS SQL
System Components

• Hardware Platforms
  ▪ Server to host database

• Software Platforms / Technologies
  ▪ Microsoft SQL Server 2016
  ▪ Visual Studio IDE (Back-end development)
  ▪ ASP.NET Core Framework, Entity Framework, C#, REST API Web Services, Angular 7, HTML 5, CSS 3, JavaScript, Typescript
  ▪ Genesys API (customer service/call center technology)
Risks

• Redesigning existing call flow
  ▪ Complicated call flow currently for IVR
    o Recreate a call flow specific to web app with approval from CE

• Integrating Web-Application with IVR
  ▪ Sync with IVR and be quick and efficient for the back end systems
    o Use Genesys API (Instance provided by CE)

• Utilize Genesys API correctly
  ▪ Accurately and efficiently use Genesys API (using provided instance)
    o Weekly code reviews to mitigate future integration risks

• Business Functionality into Customer Readability
  ▪ Provide customers easy alternative, but maintain business standards
    o Create mock pages with CE approval
    o Communicate with CE Business Division
Questions?