ORCHARD PROGRAM | CAPABILITY REPORT

JANUARY-2020

Personal Details

Name - Siddhant Agrawal | M1057840

College - Dit University

Track - Dotnet Angular

Branch - Computer Science & Engineering

Lead Details

Base Camp - Agnitra Banerjee
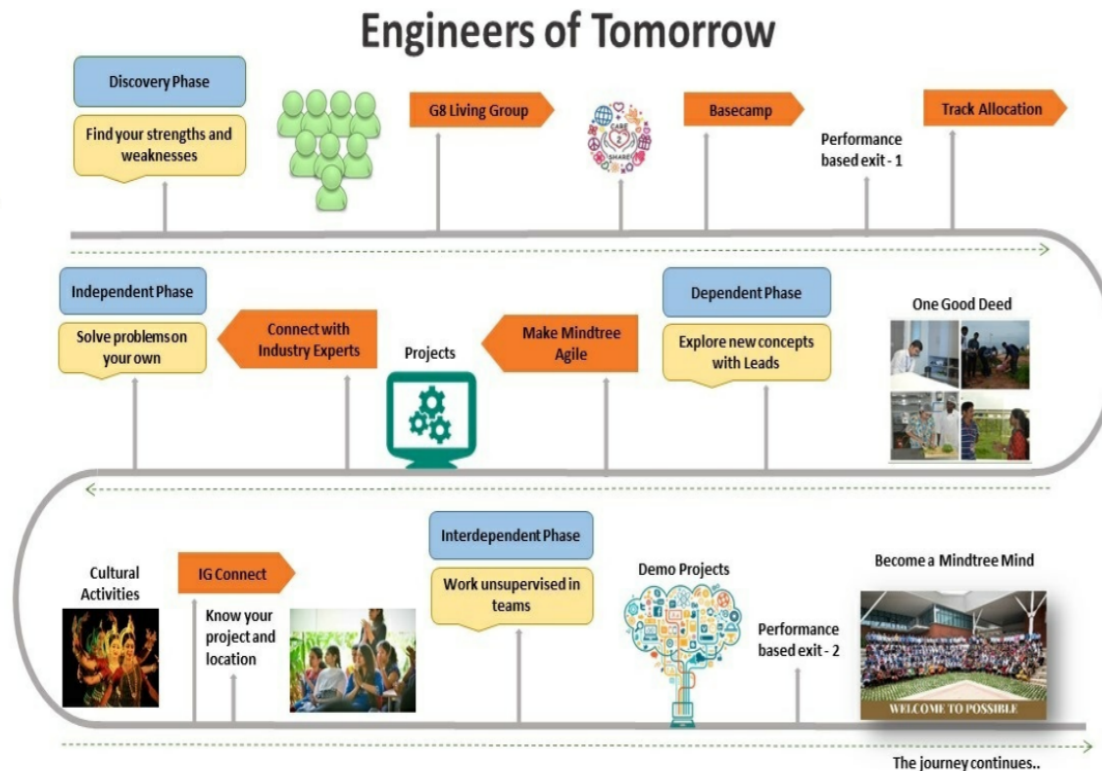
Project Camp - Keshav Krishna

Engineering Camp - Shreyansh Nahata

Batch Photo

Kalinga

Orchard is the Learning Program for Campus Minds, run out of Mindtree Kalinga, Bhubaneshwar. The Mission of Orchard being:

Foster Responsibility

Keeping alive the Collaborative Spirit in our heart to serve a larger purposes beyond our own selves. We make responsible global citizens.

Ignite Courage

At every step each of us will need the the courage to stand up and ask that one critical question that demonstrates 'Expert Thinking'. We dare to be experts.

Revive Curiosity

Unrelenting Dedication to discover the world of 'How things work' through the eyes of an engineer and the curiosity of a child.

Principles

During the course of the program, Campus Minds acquire multiple capabilities. This report carries the performance data of the individual on these capabilities. The capabilities are acquired by working on case studies, assignments and projects, self-learning, videos and discussions under the guidance of leads.

Leads do a continuous evaluation of the capabilities based on deliverables and one-on-one interactions.

The capabilities have observations. Some of the observations are tagged as Knock-Out (KO) and some as Non Knock-Out(Non KO). To acquire a capability the minimum criteria is to clear the Knock-Out observations. Based on the status of theobservations, the overall capability is said to be in either Learn, Manage or Thrive category.

Thrive   All KO observations and Non KO observations cleared.

Manage   All KO observations cleared and at least 1 Non KO observation not cleared.

Learn   At least 1 KO observation not cleared.

This capability report contains :

1. Executive Summary
2. Detailed Evaluation Report
3. Violation Summary
4. One Good Deed Summary
5. Qualitative Summary

Lead Feedback & Executive Summary

Project Feedback

He always maintains a high level of accuracy in his work. He completed the assigned task with quality.

Behavioral Feedback

He is a well-versed team player. He is capable of handling a variety of assignments.

Performance Metrics

Learn : 0 | Manage : 33 | Thrive : 3

Detailed Capability Report

Code	Summary	Status	Comments
BAS001	Use programming elements to store, load and clear data **KO List :** 1. Ability to implement right program structure - initialize variables, type casting, data types 2. Ability to work with different data types - String and primitive data types 3. Ability to work with Loop - while, do while and for loops 4. Ability to work with conditional statements - if else, else if ladder and switch case **Non KO List :** 1. Ability to do type-casting of both primitive and user defined objects.	Manage	1. Able to demonstrate if else and if else if ladder conditional statements. Able to work with loops. Concept clear for, for, while and do-while loops. Able to initialize strings, and work with it agnitra.banerjee2
BAS002	Use arrays to structure the raw data and to perform data comparison & operations **KO List :** 1. Ability to work with multi-dimensional array - 1D and 2D arrays (primitive type arrays) 2. Ability to work on string operations - search, concatenation, replace characters 3. Ability to pass array as argument to a method and return an array from a method **Non KO List :** 1. Ability to manipulate data with the given requirement -	Manage	1. Able to initialize and use 1D and 2D arrays. Able to work on strings for concatenation and replacing characters. Need to focus more on strings and arrays. agnitra.banerjee2

	modifying, update data in arrays		
BAS003	Use sorting and searching algorithms to solve given problem scenario **KO List :** 1. Ability to do a Sort correctly with the given requirements - at least two sorting techniques (preferably bubble and insertion sortings) 2. Ability to do a Search correctly with the given requirements -using both linear and binary search algorithms **Non KO List :** 1. Ability to merge two different data sets - Merging two different arrays of primitive elements 2. Ability to do the same with increased complexity - Applying sorting and searching algorithms for array of user defined objects)	Manage	1. Able to demonstrate bubble sort, linear search and binary search. Need to work on insertion sort. agnitra.banerjee2 2. Has understood the concept of insertion sort and able to demonstrate in programs as well as on paper the working along with code. agnitra.banerjee2
BAS004	Design and implement applications using basic OOP paradigms. **KO List :** 1. Proper entity classes identified and implemented? 2. Ability to initialize data members using constructors and setter methods 3. Ability to implement array of objects as per problem statement **Non KO List :** 1. Ability to pass array of objects as argument to a method and return an array from a method	Manage	1. He is able to visualize the concepts of objects and array of objects. Need to work on problems with increased complexity agnitra.banerjee2 2. Siddhant has demonstrated & worked on one entity & double entity problems. Identifies the problem statement & has created proper entity classes. Has effectively followed conventions & used getter setter constructors. Array of objects has also been clearly understood. shreyansh.nahata2

BAS005	Write select queries to retrieve specific set of data from given database **KO List :** 1. Ability to write basic select queries and retrieve data 2. Ability to use Join (inner and outer joins) and having clause in select queries, group by, order by and limit) **Non KO List :** 1. Ability to use SQL numeric functions - AVG, COUNT, FLOOR, GREATEST	Manage	1. Is able to write basic select queries to retrieve values from the table. Has worked on inner join for one of the solutions, needs to work on outer join. Is clear with concepts of joins and can demonstrate using sets. agnitra.banerjee2 2. Need to work on Joins. shreyansh.nahata2
DOT001	Use VS IDE for programming Dotnet application **KO List :** 1. Ability to setup Visual Studio IDE for a given project scenario 2. Ability to use debugging options - breakpoint, immediate window, quickwatch 3. Ability to compile, build, clean, rebuild and run the application **Non KO List :** 1. Ability to install specified plugin from IDE Market place	Manage	1. Siddhant is comfortable using Visual Studio. Has an idea about debug and release mode. Also, have used demonstrated the ability to use multiple debugging options. shreyansh.nahata2
DOT002	Design and implement classes and objects for a given application scenario **KO List :** 1. Ability to define appropriate classes and objects for a given scenario 2. Ability to implement appropriate type of inheritance and polymorphism for a given scenario 3. Ability to use OOP language specific features - package, static, constructors, interfaces and final **Non KO List :**	Manage	1. Siddhant, please try to demonstrate all the OOPs concept during next discussion shreyansh.nahata2 2. Able to understand opps concept and implemented through program. Below concept implementented: 1.Object 2.Class. 3.Interface

			4.Polymorphism
	1. Ability to use nested classes and anonymous inner class	Manage	5.Constructor,static and final .
			keshav.krishna
			3. Validated through program and discussion.
			keshav.krishna
DOT003	Use appropriate classes using collections to handle group of business objects KO List : 1. Ability to use List (ArrayList and LinkedList), Set (HashSet and TreeSet) and Map (HashMap and TreeMap) collection APIs for a given scenario 2. Ability to iterate through collection objects and using forEach method 3. Ability to use IComparable, IComparer And IEquatable interfaces for non-string data types Non KO List : 1. Use Generics and Var args for application scenario	Manage	1. Siddhant was comfortable working with different collections (both generic and non-generic). Also has a fair knowledge on comparing different collections. shreyansh.nahata2
DOT004	Use C# new features to strengthen business logic of your application KO List : 1. Ability to use stackalloc in nested expressions 2. Ability to use Default Interface Methods 3. Ability to use Nullable reference type Non KO List : 1. Ability to use Advanced Pattern Matching	Manage	1. Siddhant , as discussed please start working on c# new features shreyansh.nahata2 2. Able to understand and explain below. 1.stackalloc 2.Default Interface 3.Nullable reference keshav.krishna 3. Validated through discussion.

			keshav.krishna
DOT005	Implement exception handling to increase reliability of an application **KO List :** 1. Ability to use try, catch and finally blocks for a given application scenario 2. Ability to use throw keyword 3. Try-catch block is used at the method level i.e. all the code is unnecessarily put within try-catch block? **Non KO List :** 1. Unchecked exceptions are handled with conditional statements instead of try-catch	Manage	1. Demonstrated and explained the concepts. Has implemented in the problem statements. shreyansh.nahata2
DOT006	Follow best practices while handling exceptions **KO List :** 1. There is an appropriate catch block instead of generic Exception catch block? 2. Ability to implement- wrapping & funneling 3. Ability to implement custom exceptions with appropriate messages **Non KO List :** 1. Understand concept of using statements in C# and implement them	Manage	1. Siddhant was able to implement custome and user defined exception handling in Juice Shop Problem. He was able to demonstrate wrapping with a small example during discussions shreyansh.nahata2
DOT007	Use I/O streams to perform read and write operations **KO List :** 1. Ability to read and write data using different types of streams, chain of streams 2. Ability to implement both serialization and de-serialization 3. Ability to read and write data from excel file	Manage	1. Siddhant, Please practise more on excel IO and try to demonstrate it next time during discussions shreyansh.nahata2 2. Able to read and write data in text file.

	Non KO List : 1. Ability to use Async for File Access		keshav.krishna 3. Please work in Read/Write Excel file ans Serialization. keshav.krishna 4. Able to work on below : 1.Read/Write data in Excel 2. Serialization and De-Serialization. keshav.krishna 5. Validated through program and discussion. keshav.krishna
DOT008	Define relational database to build database for an application KO List : 1. Ability to define Tables as per 3rd normalization for a given problem statement 2. Ability to define tables and assign relationships 3. Ability to use right data types for columns Non KO List : 1. Able to depict the table design visually using ER model and explain	Manage	1. As per privious lead, he is able to implement and explain the capabilities. keshav.krishna
DOT009	Write DDL & DML SQL statements to query the database using MySQL KO List : 1. Ability to write both DDL ((create & alter) & DML (insert, delete and update) statements for a given problem case study 2. Ability to write group by, joins - inner and outer joins 3. Ability to create stored procedure and functions for a given scenario Non KO List :	Manage	1. Was asked to make changes and use stored procedure in the problem. Was able to demonstrate and implement it during discussion. Able to work with joins and inner joins. Have completed Juice shop system with ado.net shreyansh.nahata2

	1. Ability to use various types of regular expressions in SQL Server query		
DOT010	Use ADO.NET features to connect to database and perform a simple query operation KO List : 1. All necessary steps are followed to connect ADO.NET and database? 2. Able to work with CRUD operations in connected scenario? 3. Valid steps are followed to invoke stored procedure/function? Non KO List : 1. Primary keys are auto generated	Manage	1. Siddhant, Has done CRUD operations and used both connected/disconnected mode. Kindly work on stored procedures. shreyansh.nahata2
DOT011	Use MongoDB database and perform CRUD operations KO List : 1. Ability to differentiate between RDBMS and NoSQL database 2. Ability to write a data model tree structure for a given application scenario 3. Ability to perform CRUD operations using MongoDB shell Non KO List : 1. Ability to perform CRUD operation programmatically using C#	Manage	1. Understand RDBMS vs Nosql. Able to perform CRUD operation. Able to implement data model tree structure. keshav.krishna
DOT012	Create Web page using proper HTML tags and web standards KO List : 1. Ability to create pages using basic HTML5 tags - div, p, table,img, href, etc.,	Manage	1. Understand Html tags: div, p, table,img, href, etc. Able to validate field using Html and javascript.

	2. Mandatory fields are validated with appropriate message to user? 3. Create Single Page Application using HTML5 anchor tags **Non KO List :** 1. Ability to work with Geolocation, Web sockets and Web Workers		Able to create SPA using HTML. keshav.krishna
DOT013	Implement style using CSS and SASS to create good user experience **KO List :** 1. Ability to styles using CSS3 attributes - class, id, and inline CSS 2. Ability to create basic effects using CSS3 transition - mouseover and 2D transforms 3. Ability to create complex styles, templates like sliders, megamenu, parallax effects, canvas using CSS3 **Non KO List :** 1. Ability to create basic style sheet using SASS	Manage	1. Implemented styles using CSS3 attributes - class, id, and inline CSS. Able to create basic effects using CSS3 transition - mouseover and 2D transforms. Able to create complex styles, templates like sliders, megamenu, parallax effects using CSS3 keshav.krishna 2. Validated through script and discussion. keshav.krishna
DOT014	Use JavaScript to manipulate DOM and do client side validation **KO List :** 1. Ability to create basic JavaScript functions, declare data types, loops, operators, conditions 2. Ability to create iterators, classes and apply arrow functions 3. Ability to create events and DOM manipulations **Non KO List :** 1. Ability to debug & find out the root cause	Manage	1. Able to create basic JavaScript functions, declare data types, loops, operators, conditions. Able to create iterators, classes and apply arrow functions. Able to create events and DOM manipulations keshav.krishna
DOT015	Automate the build using MSBuild Tool **KO List :**	Manage	1. Able to understand Ms-build and its uses. Able to build the project using command line.

	1. Ability to define basic elements of MSBuild project file 2. Ability to use MSBuild tool to build projects 3. Create and Build a project from the command line **Non KO List :** 1. Ability to add appropriate plugins for the given project		Implemented Xml file which used to build. keshav.krishna
DOT016	Write effective unit test cases using MSTest framework **KO List :** 1. Ability to create, run and debug unit tests 2. Ability to use different types of assert Methods 3. Ability to implement Test driven development **Non KO List :** 1. Ability to use mock tool to write unit test cases	**Manage**	1. Able to understand TDD vs BDD Implemented MStest in Book your meal project. Able to debug test cases. keshav.krishna
DOT017	Follow coding standard and maintain high quality by analyzing various reports generated through code quality tools **KO List :** 1. Follow the coding standard as per defined guidelines - standard project structure and naming conventions 2. Adequate comments are written in the code? 3. Effort to handle memory management in better way? **Non KO List :** 1. Use SonarQube code quality tool to generate code coverage report	**Thrive**	1. Understand coding standard and followed during Book Your Meal project. Understand Memory management in .net.Implemented IDispose In mvc . Used Sonar tool to check code quality for Book your Meal project. keshav.krishna
DOT018	Implement MVC framework using .Net MVC 5 **KO List :** 1. Ability to create project, configure MS Build and property files for the given scenario 2. Ability to implement control class and HTML pages as per problem statement	**Manage**	1. Created MVC application using CRUD. I keshav.krishna 2. Created MVC application and performed CRUD. Implemented control class and HTML pages. Implement authentication in MVC.

	3. Ability to implement authentication using Oauth and private Email Ids Non KO List : 1. Ability to use ASP.NET MVC Form Validation to validate input fields		keshav.krishna
DOT019	Create REST APIs using Web API KO List : 1. Ability to develop RESTful web services with Web API 2. Ability to implement API Documentation With Swagger 3. Ability to implement various response code with customized message Non KO List : 1. Ensure Logging & Error handling according to best practices	Manage	1. Able to create RESTful web services with Web API. Implemented API Documentation With Swagger. Implement various response code with customized message. keshav.krishna
DOT020	Use Entity framework to implement persistence layer of an application KO List : 1. Ability to implement database model using database first approach 2. Ability to implement code first approach 3. Ability to implement CRUD operations using Entity framework Non KO List : 1. Ability to Query using LINQ	Manage	1. Able to implement database model using database first approach. Able to implement code first approach. Able to implement CRUD operations using Entity framework. keshav.krishna 2. Validated through program and discussion. keshav.krishna
DOT021	Use DotNET Core platform to build Microservices KO List : 1. Ability to configure Microservice environment 2. Ability to implement API endpoints 3. Ability to implement API Documentation With Swagger	Manage	1. Able to understand microservice. Created two micro services using .net core and communicating through Http client. Implemented API endpoints. Able to implement API Documentation With Swagger.

ID	Skill Description	Level	Evidence
	Non KO List : 1. Ability to run services using Docker	Manage	keshav.krishna 2. Validated through program and discussion. keshav.krishna
DOT022	Use .Net Security features to set up basic security controls for an application **KO List :** 1. Ability to secure the endpoints with HTTP Basic authentication 2. Ability to add default security setup for the given application scenario 3. Ability to implement ASP.Net Role Based Access Authorization **Non KO List :** 1. Ability to integrate and set up talk to LDAP/Azure AD server	Manage	1. Able to understand security mechanism in .net. Understand authentication vs authorization. Implemented Form based authentication in mvc. Implemented Role based authorization in mvc. keshav.krishna 2. validated through code and discussion. keshav.krishna
DOT023	Use agile SCRUM Framework to develop features of an application **KO List :** 1. Ability to identify and map User Stories to features 2. Use Jira tool to track the progress 3. Ability to define acceptance criteria for a given use case **Non KO List :** 1. Ability to Estimate and plan sprints	Manage	1. Able to understand Agile. Understand scum and implemented in Book your meal project. Worked on Jira. Created Epic,user stories and linked that during project work. keshav.krishna
DOTA002	Develop Web app using basic Angular features **KO List :** 1. Ability to create a Angular application using Angular CLI 2. Ability to use and create angular modules and components	Thrive	1. Understand Angular CLI and uses. keshav.krishna 2. Please work on below items:

	3. Use basic routing and services for navigation Non KO List : 1. Ability to apply angular material design		1.What is module and how it works. 2.What is Component . 3.What Routing and how to use Routing in angular. Basic concept should be clear without that there is no point for implementation. keshav.krishna 3. Able to understand basic concept of angular: 1.Component and modules. 2.Routing and services. 3.Angular material design. keshav.krishna 4. Validated through Book your meal project and discussion. keshav.krishna
DOTA003	Increase responsiveness of your application by using asynchronous programming KO List : 1. Ability to use Asynchronous methods using async methods 2. Ability to differentiate between process and thread 3. Able to understand thread lifecycle Non KO List : 1. Ability to implement inter thread communication using wait(), pulse() methods	Manage	1. Able to use Asynchronous methods using async methods. understand differentiate between process and thread. Able to understand thread lifecycle keshav.krishna
DOTA004	Use Git as code source control tool to manage version control	Manage	1. Able to understand GIT.

	KO List : 1. Ability to integrate IDE with Git 2. Manage files with Git (move, rename, delete, revert changes) and update files managed outside Git 3. Create branches and resolve merge conflicts Non KO List : 1. Create and fork repositories on Git and push changes back after working on them locally		Able to work with git using command prompt and visual studio. Able to create branch and merge. keshav.krishna
DOTA005	Use Azure DevOps to automate integration and deployment process KO List : 1. Work with Azure DevOps, understand the basics of CI/CD 2. Configure Azure DevOps to build your source code 3. Deploy your application on Azure Non KO List : 1. Ability to use Azure Test plans and Azure Repos	Manage	1. Understand CI/CD. Able to create pipeline for angular and Web api project. keshav.krishna
DOTA006	Develop responsive pages using Material Design, Bootstrap & Media Query KO List : 1. Ability to create responsive elements using Bootstrap(navigation, breadcrumb, button, images, headers, glyphicons) 2. Ability to create carousals, responsive grids, forms, lists using Bootstrap 3. Ability to write Media Query to achieve responsive web page Non KO List : 1. Ability to differentiate responsive patterns & know to	Manage	1. Implemented Bootstrap(navigation, breadcrumb, button, images, headers). Implemented carousals, responsive grids, forms, lists using Bootstrap. Able to write Media Query to achieve responsive web page. keshav.krishna 2. Validated through Book your meal project, Script and discussion. keshav.krishna

	create at least two patterns (Fluid, Column Drop, Layout Shifter, Content Reflow, Flux)		
DOTA007	Develop Rich Web Application using Angular 6+ **KO List :** 1. Ability to use & create angular service and providers 2. Ability to create and use structural and attribute directives 3. Ability to create and use template driven forms and angular reactive forms **Non KO List :** 1. Ability to apply route guards, lazy loading of components	Manage	1. Able to create Angular application and performed CRUD . Created angular service and providers. created template driven forms and angular reactive forms. keshav.krishna
DOTA008	Use Jasmine & Karma skills to build potent, interactive applications **KO List :** 1. Ability to create test cases using Jasmine and Karma - component, method level testing. 2. Ability to use developer tools for debugging 3. Ability to explain use cases of Protractor **Non KO List :** 1. Ability to generate code coverage report	Thrive	1. created test cases using Jasmine and Karma - component, method level testing. Used Protector tor end to end testing. Able to debug test cases. Able to generate code coverage report using angular CLI command. keshav.krishna 2. Validated through book your meal project,Test cases and discussion. keshav.krishna
DOTA009	Analyze the impact of change request and refactor the code **KO List :** 1. Ability to prepare impact of a change request for a given application scenario 2. Ability to implement change request without affecting	Manage	1. Understand change request & Impact Analysis. Know defect fixing process . Understand how to fix the issues without breaking system.

	previous changes 3. Ability to debug the code to remove injected bug **Non KO List :** 1. Ability to change the DB and class design to implement change requests		keshav.krishna

Project Details

Introduction

SVC Food Services private limited is a global hospitality company specialized in an internet-related services and products in the hospitality field.

They are looking for partner who can help to build web based portal "BookYourMeal (BYM)" to connect food vendors with customers and it should help customers to identify & choose their favorite food from various categories that meets their taste.

Team Members

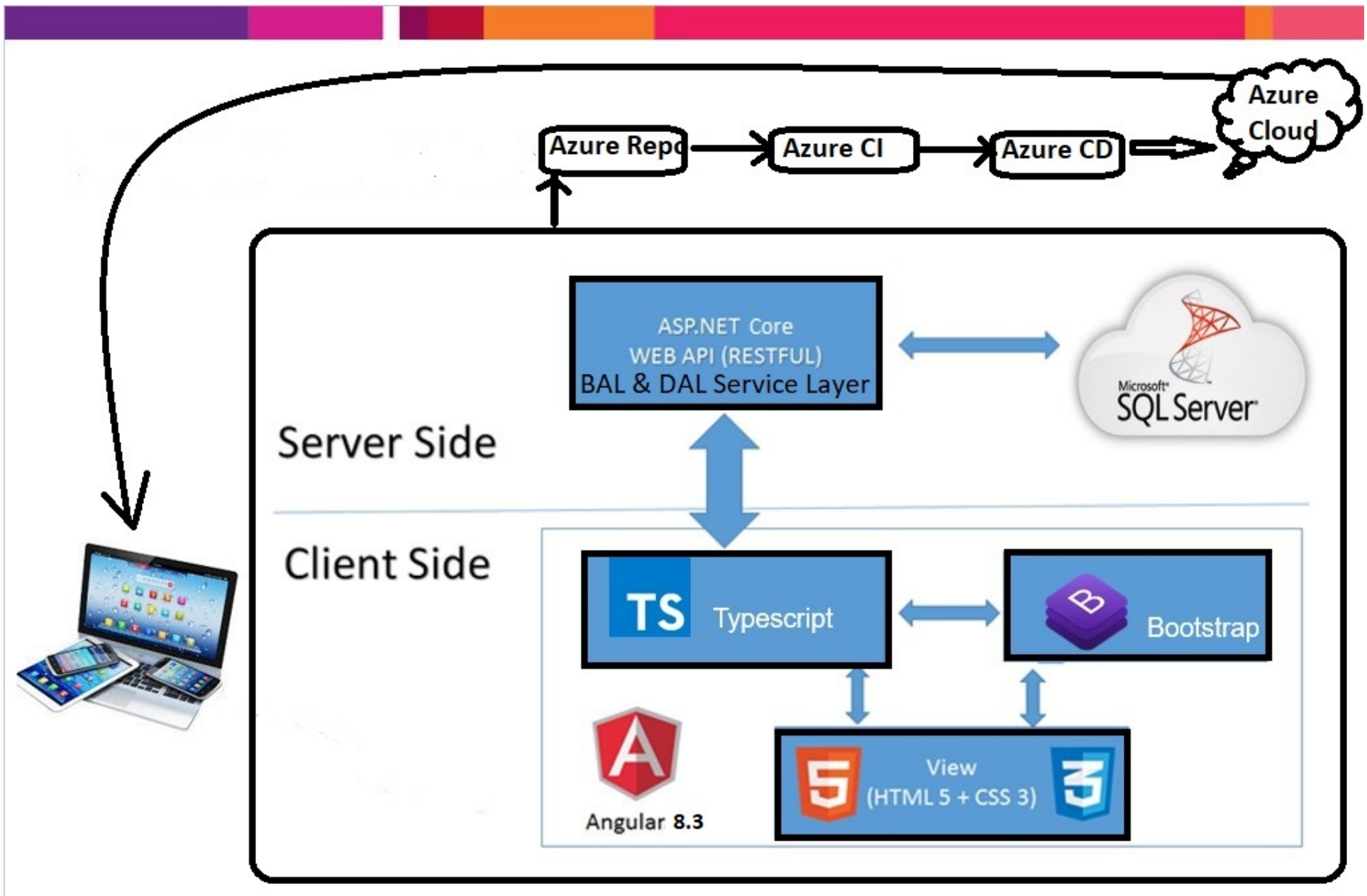Navneet Bhatia (M1057820)   Siddhant Agrawal (M1057840)

Abhinav Loona (M1057932)   Krishna Patel (M1057904)

Rashad Male (M1057823)   Shweta Mridul (M1057860)

Architectural Diagrams and Tech Stack

Team Sprint Report

User Stories

Total	Done	Pending Review	Backlog	In Progress	Blocked
20	20	0	0	0	0

Task Metrics

Total	Done	In Progress	Blocked	Pending Review	Backlog
111	111	0	0	0	0

Bug Metrics

Total	Done	To Do	In Progress	Deferred	Pending Review	S1	S2	S3
31	29	0	0	2	0	0	18	13

Individual Sprint Report

User Stories

Total	Done	Pending Review	Backlog	In Progress	Blocked
7	7	0	0	0	0

Task Metrics

Total	Done	In Progress	Blocked	Pending Review	Backlog
7	7	0	0	0	0

Bug Metrics

Total	Done	To Do	In Progress	Deferred	Pending Review	S1	S2	S3
11	9	0	0	2	0	0	2	9

Retrospective

Retrospective – TimeBox1

What went Well

In TimeBox1, With good communication between the development team. We are able to complete our Task on Time and delivered the demo to the Client and the Client appreciates our efforts. As we are in a learning stage, it's a good Experience.

What did not go Well

While working on Timebox 1, we made some changes in UI from the WireFrame which creates conflict between SDET Team and the Development Team. As testers prepared the Test cases according to the WireFrame.

Improvement Area

We will communicate with SDET Team before we going to make any changes.

Retrospective- TimeBox-2

What went Well

1.) We are able to fulfill Client Requirements on time.

2.) Communication between the SDET Team and Development Team was Good.

3.) The Client was very much satisfied with the product we delivered.

What did not go Well

1.) While Unit testing the code, we were not able to cover the 50% code of Line at once. Then we as a Team figure out how Sonar is analyzing and then we achieve the result of 53.8 %.

2.) SDET Team faced difficulty while performing Automation Testing on Microsoft Edge.

Improvement Area

1.) UI/UX of the project could have been much better.

2.) The Test case percentage could be increased.

3.) Code smells could be decreased.

Customer Feedback

CustomerFeedback – TimeBox1

Observation

NA

Improvement Area

NA

Action Items

a) Good job everyone for the work we have accomplished so far.

b) Appreciate all of your efforts.

c)Change the BookYourMeal logo and logo should contain a descriptive name.

d)City search field autocomplete should come only downwards.

e)Space to be added between email field and submit button on forgot password pop-up.

f)After changing password, a new pop-up has to be displayed instead of alert.

g) not to use alert.

h) add images to home page

CustomerFeedback - TimeBox2

Observation

a) Project development team has done a wonderful job in completing the work on time with great quality. Product looks great and is intuitive.

b)They have shown great character in co-originating with team members as all of them are working virtually.

c)I am quite pleased to see that each of you have taken the ownership, and Thank you for all the hard work and commitment!

Improvement Area

NA

Action Items

NA

CustomerFeedback – TimeBox2

Observation

a) Project development team has done a wonderful job in completing the work on time with great quality. Product looks great and is intuitive.

b)They have shown great character in co-originating with team members as all of them are working virtually.

c)I am quite pleased to see that each of you have taken the ownership, and Thank you for all the hard work and commitment!

Improvement Area

NA

Action Items

NA

Violations Report

No Violations