CSE498R
Spring 2019
Internship Report
On

Internship at Debug BD Limited

Supervised By

Mr. Shaikh Shawon Arefin Shimon

Lecturer

Department of Electrical & Computer Engineering (ECE)
School of Engineering & Physical Sciences (SEPS)
North South University

Submitted By

Ishtiak Ahmed

153 0494 042

Ishtiak.Ahmed@northsouth.edu

DECLARATION

I take the pleasure of submitting my report on the topic — **Internship at Debug BD Limited**, which was assigned to me as a part of my bachelor's degree in Computer Science and Engineering.

While I was working on this report I realize, gradually it helps me build a form of knowledge and the experience that will expressly help me in my nearest and possibly in the whole run of my professional life.

Working on this report requires some great expertise. But I didn't lack any chance to give my best on this. And give the best of me to apprehend the quest of this internship. I am highly anticipated that my assiduity will fit out its motive.

The authentication of this report lies beneath its uniqueness. Very few objects are as genuine as the report is. And it was built and submitted only for this sake. It wasn't used and will never be used to any other purpose ever.

Signature

Ishtiak Ahmed
ID: 153 0494 042
Date : 16-Feb-21

APPROVAL

The internship report titled **Internship at Debug BD Limited** has been submitted by Ishtiak Ahmed bearing ID 153 0494 042, to the Department of Electrical & Computer Engineering of North South University, Dhaka, Bangladesh, for the partial fulfillment of the requirements for the Degree of Bachelor of Science (BSc) in Computer Science and Engineering.

NSU Supervisor

Sk. Shawon Arefin

Date: Feb 16, 2021

Mr. Shaikh Shawon Arefin Shimon
Lecturer, Department of Electrical & Computer Engineering
North South University
Dhaka, Bangladesh

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Acknowledgment

Most importantly, I am profoundly obliged to my entry-level position manager Mr. Shaikh Shawon Arefin Shimon, Lecturer, North South University. He permitted me his valuable time openly and directly from the earliest starting point of this temporary position work till the finish. His accomplished direction, friendly consolation, and basic recommendations gave me vital assistance to the report and cleared a path for the significant completion of this report in a brief length. I have no wavering saying that without his steady supervision and important counsel and proposal, I would have faced a tremendous amount of difficulties to finish the entire venture all alone.

My heartfelt gratitude to Mr. Mohammad Tanzilur Rahman (Supervisor, Project Manager, Debug BD Limited) and all the other members of the Debug BD team who helped me accomplish every task mentioned in this internship report.

ABSTRACT

This internship report documents my experience as an intern at Debug BD Limited during the period from 14th February,2020 to 30th April,2020 In this time interval, I worked as an Android App Development Trainee.

I was assigned to a team where I familiarized myself with a lot of new technologies including but not limited to Flutter and Dart Language. The team is developing android and iOS cross-platform applications.

The team leader was my internship supervisor, Mr. Mohammad Tanzilur Rahman (Supervisor, Project Manager, Debug BD Limited). He routinely assigned me new tasks so that I could learn new things and grow competency for the stacks involved.

All the observation that is gained by working at Debug BD will reflect through this report with proper analysis based on theory.

DESCRIPTION

About Debug BD

Debug BD is a purely quality-driven specialist in software creation & support, device management, and associated IT services with a significant emphasis on the creation of mobile apps and games.
Debug BD was founded in August 2014 with a vision to build various mobile applications and games to take Bangladesh into the global mobile device and game development arena.

With a rare combination of innovative leadership, seasoned expertise, smart processes and compatible technology, Debug BD is dedicated to recognizing and addressing the needs of real users that can be met by public and private sector mobile applications throughout Bangladesh. It is an organization where, together with professionals from both the technological and functional sector classes, it seeks to provide effective market solutions. It recognizes the value of functional knowledge in designing business strategies, and its effects. The organization is continually aiming to be a leading technology firm with a deep understanding of market and work. The secret to the success of the business is maintaining a close working relationship with the customers by providing the best possible solutions to their needs; developing and maintaining a comprehensive knowledge and understanding of the purpose of the customer and helping them optimize the benefits.

By providing the full spectrum of services, the company aims to create itself as the best option in computing and information technology, consulting, and development services.

The business goal is to attain a reputation in the ICT industry as a quality, high standard & reliable solution & service provider company.

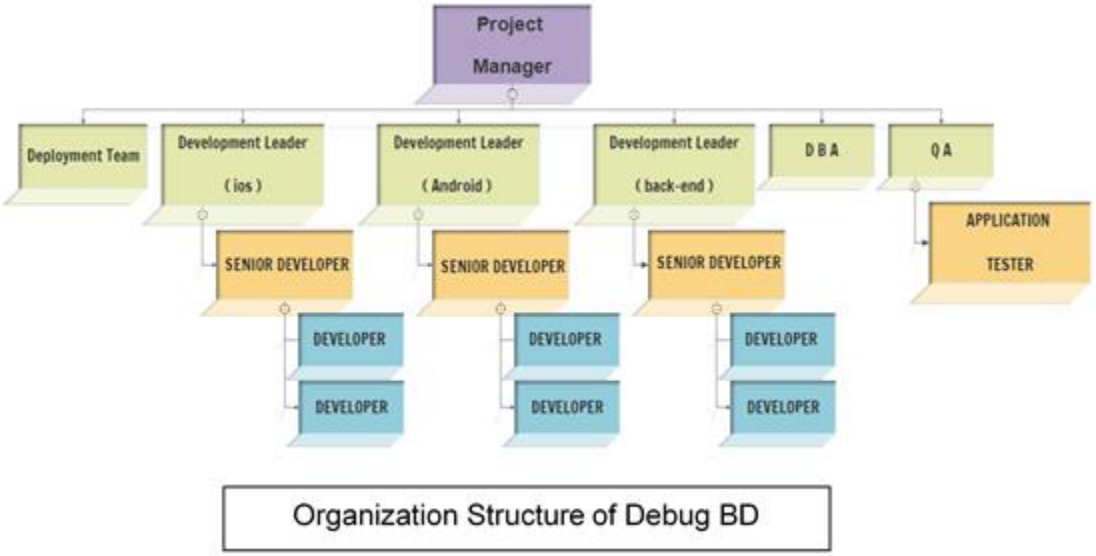
Business Mission is aimed at achieving 100% customer satisfaction by offering quality goods and services at an affordable price. Their forward vision is to aspire to become an organization that is capable of requiring an unconditional response from the targeted niche of technology-based corporate solutions. They always assume that the sky is the limit for their improvisation reach and the organization is always ready to carry the accomplishments of the companies to the next stage. They are growing, and still want to continue on the rising streak.

Services of Debug BD

- **WEB APPLICATION:** The company proved excellence in designing custom web apps, responsive websites, the creation of the WordPress theme, interactive websites, e-commerce solutions, and so on.
- **APP DEVELOPMENT:** Developing applications for the clients for iPhone & Android is one of the major sectors of the company. The company's professional android & iPhone app development team examines and analyzes to meet your needs and aspirations.
- **GAME DEVELOPMENT:** Game Developers at the company are highly experienced in designing 2D/3D Games, Educational & Kids Games, Real-time & Strategic Games, Puzzles & Cards Games, and so on.
- **Live Software Quality Check and Testing:** The company has expertise in the department of Quality Assurance (QA) software which is a specialist in automated software quality assurance and manual testing.
- **SOFTWARE:** The company develops Accounting & Inventory Software, Invoice & Billing Software, ERP, Medical Management, POS, Restaurant Management, HR & Payroll Software, etc.
- **UX/UI DESIGN:** Need your website improved with full overhaul and build? Or do you need a brand-new website that has a great user experience? The professional expert team of the organization will help – the company has done it hundreds of times.
- **ONLINE MARKETING:** The expert team of the company will help clients remain focused on their activities and market their products on social media and online. The company helps clients enter the business world and lead the way in search engines.
- **CYBERSECURITY:** The company is designing cloud technology applications for foreign customers e.g. Mjoll, Vizrt, 7-mountains, etc. The business also offers tech consulting services for domestic and international companies.
- **GREAT SUPPORT:** The Support provides customers with all the alerts, surveillance, and monitoring. They will know remotely that the systems still run smoothly.

Organization Structure

Debug bd is a very organized company with a team dedicated to every task. The project manager assigns employees to their tasks according to their expertise. The company follows the organizational hierarchy shown below in the flow-chart.



Organization Structure of Debug BD

The company uses the Functional Organizational Structure because functional structure is based on an organization being divided up into smaller groups with specific tasks or roles. For example, the company could have a group working in the Development team, another in DBA, and another in Backend.

Each department has a Leader who answers to an executive a level up in the hierarchy who may oversee multiple departments. One such example is a leader of marketing who supervises the Development team and answers to a Project Manager who is in charge.

An advantage of this structure is employees are grouped by skillset and function, allowing them to focus their collective energies on executing their roles as a department.

One of the challenges this structure presents is a lack of inter-departmental communication, with most issues and discussions taking place at the managerial level among individual departments. For example, one department working with another on a project may have different expectations or details for its specific job, which could lead to issues down the road.

Development Tools and Software's

Debug BD uses various Languages and software's for various types of app development Web. Some examples are given below

- **WEB APPLICATION:**

  In Debug BD for the development of web applications the company use java, JavaScript generally.

- **APP DEVELOPMENT:**

  The company create Android apps using java and kotlin. Recently The company are using Dart language with flutter for both android and iOS applications

- **GAME DEVELOPMENT:**

  In Debug BD for the development of the companies Games the Developers mostly use C++ and java for.

- **SOFTWARE:**

  The company develops Accounting & Inventory Software, Invoice & Billing Software, ERP, Medical Management, POS, HR & Payroll Software, Restaurant Management, etc. Mostly The company uses java for this kind of software.

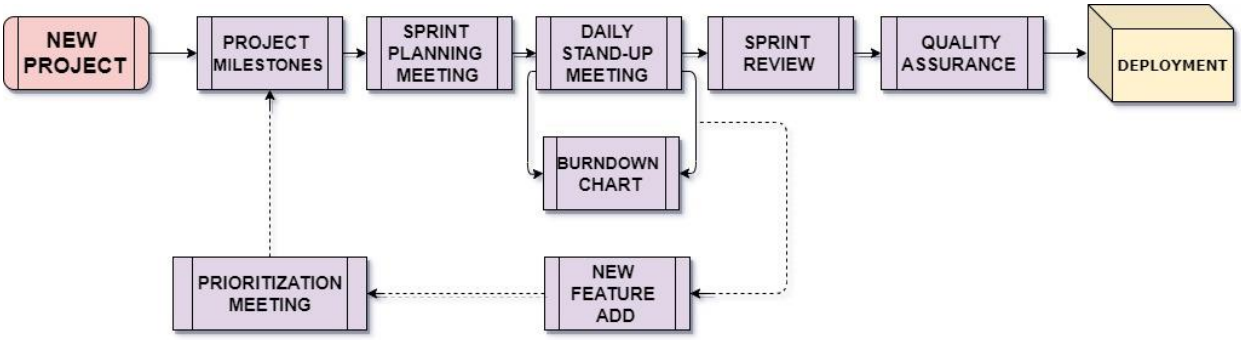
- **DATABASE**

  In Debug BD for the development of web applications, the company uses MySQL for handling Database usually and for mobile applications the company use SQLite and Firebase.

The company also uses various software and tools as per the demands of the company's clients.

Organization Methodologies

In debug bd the company has a team meeting every morning to exchange information about the ongoing projects and to assign new tasks if needed. Besides that, use Trello software to keep a record of the given task and their updates the company also uses the Bitbucket platform to organize, share, and store the companies works. The company won't use the continuous integration in the company's process. The company divides the company's projects in several parts and divide the works in teams. In the industry that is known as the agile methodology.



Project Development Flow Chart of Debug BD

It this way the company can ensure Customer satisfaction through early and continuous software delivery. The company can Accommodate changing requirements throughout the development process. It provides frequent delivery of working software Collaboration between the business stakeholders and developers throughout the project Support, trust, and motivate the people involved. It allows us to enables face-to-face interactions.

Because of using Agile methodology, it helps us to support a consistent development pace
It increases attention to technical detail and design enhances agility and Simplicity
Self-organizing teams encourage great architectures, requirements, and designs
Regular reflections on how to become more effective.

Agile software methodology

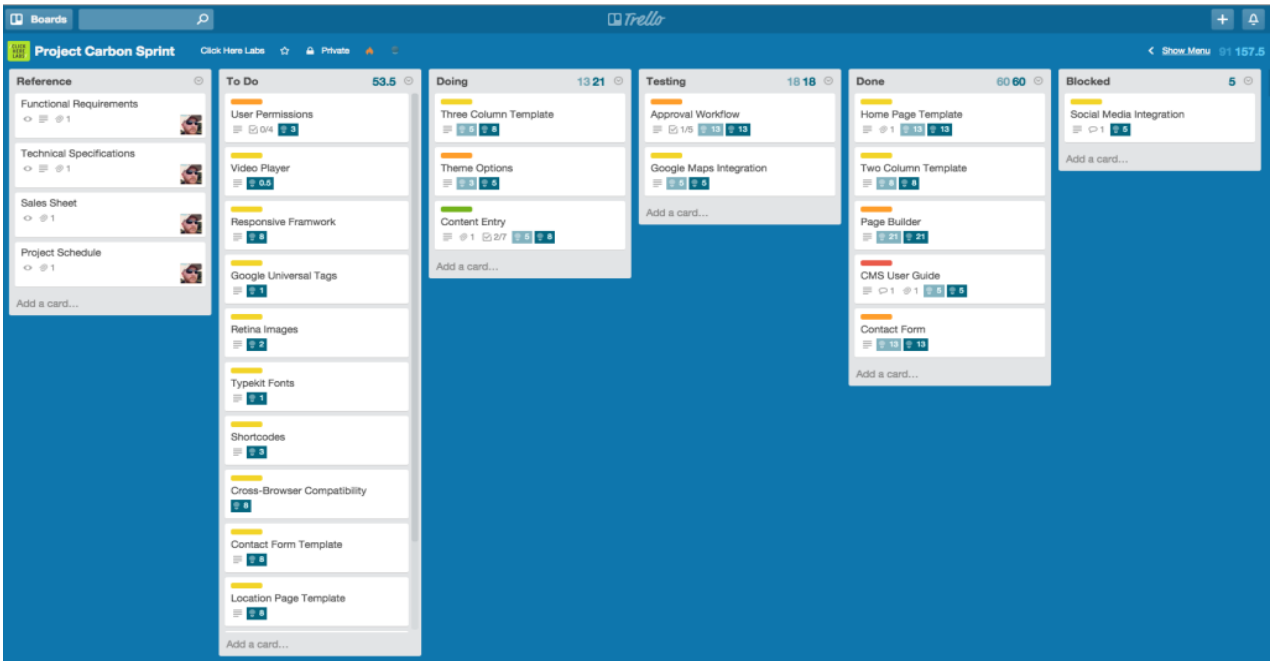
Agile project approach breaks down projects into small parts that are finished in work sessions ranging from the design process to testing and quality control (QA). These sessions are also called sprints, the term used in one particular and common form of Agile development known as Scrum for iteration. Sprints are generally short, running over days or weeks; they're typically two to four weeks long.

The Agile technique encourages teams to release segments when they finish. This continuous release schedule helps teams to prove successful in these segments and, if not, easily repair flaws. The idea is that this helps reduce the risk of large-scale failures, as the lifecycle of a project is constantly improving. They follow such activities as Continuous Delivery (CD) and Continuous Integration (CI), using technology that automates measures to accelerate product release and use.

Agile Project Management doesn't need a project manager to be present or active. While a project manager is necessary for success under the conventional methodologies of project delivery, such as the waterfall model where the position manages the budget, staff, project scope, quality, specifications, and other key elements, on the other hand, the task of project manager under APM is distributed among team members.

In Debug BD the Project managers writes the user stories in presence of the scrum master, developers. The Scrum Master then preside the sprint planning with the whole team along with the project manager and divides the tasks between the developer team.

Debug BD uses Trello to assign tasks and maintain the workflow of the project. A screenshot is attached for a better understanding of the workflow.



Difference between Agile and Waterfall Model:

Agile	Waterfall
It separates the project development lifecycle into sprints.	The software development process is divided into distinct phases.
It follows an incremental approach	Waterfall methodology is a sequential design process.
Agile methodology is known for its flexibility.	Waterfall is a structured software development methodology so most times it can be quite rigid.
Agile can be considered as a collection of many different projects.	Software development will be completed as one single project.
Agile is quite a flexible method which allows changes to be made in the project development requirements even if the initial planning has been completed.	There is no scope of changing the requirements once the project development starts.
Agile methodology, follow an iterative development approach because of this planning, development, prototyping and other software development phases may appear more than once.	All the project development phases like designing, development, testing, etc. are completed once in the Waterfall model.
Test plan is reviewed after each sprint	The test plan is rarely discussed during the test phase.
Agile development is a process in which the requirements are expected to change and evolve.	The method is ideal for projects which have definite requirements and changes not at all expected.

In Agile methodology, testing is performed concurrently with software development.	In this methodology, the "Testing" phase comes after the "Build" phase
Agile introduces a product mindset where the software product satisfies the needs of its end customers and changes itself as per the customer's demands.	This model shows a project mindset and places its focus completely on accomplishing the project.
Agile methodology works exceptionally well with Time & Materials or non-fixed funding. It may increase stress in fixed-price scenarios.	Reduces risk in the firm-fixed-price contracts by getting risk agreement at the beginning of the process.
Prefers small but dedicated teams with a high degree of coordination and synchronization.	Team coordination/synchronization is very limited.
Products owner with team prepares requirements just about every day during a project.	Business analysis prepares requirements before the beginning of the project.
Test team can take part in the requirements change without problems.	It is difficult for the test to initiate any change in requirements.
Description of project details can be altered anytime during the SDLC process.	Detail description needs to implement a waterfall software development approach.
The Agile Team members are interchangeable, as a result, they work faster. There is also no need for project managers because the projects are managed by the entire team	In the waterfall method, the process is always straightforward so, the project manager plays an essential role during every stage of SDLC.

Agile Scrum meetings:

Scrum is an agile system that handles the project at short intervals, and generates value iteratively. It's the most popular technique used to handle a software development project in recent years. Scrum team commitment is established in such a way that team is self-driven and target-oriented, thus more chances of success.

Agile ceremonies are various practices that are carried out by Agile implementing teams. Sprint Planning, Daily Stand-up (daily scrum), Sprint Review and Retrospective are the essential scrum meeting points. Additionally, teams may need backlog management sessions where the product manager ensures user story consistency and prioritizes the list of features.

1. Sprint Planning

An agile ceremony conducted by Scrum Master, Production Team, and Product Owner. This is held at the beginning of a new sprint, with the intention of setting up a priority worklist and aligning the whole team during the sprint for success. The Product Owner will negotiate a priority list with the production team and eventually the entire community will come up with the amount of effort involved. In this step, the team then decides how much of the backlog work will be done. Sprint session period can be sustained within 4-6 hours by adopting the Best Sprint preparation practices.

Before the conference, the Company owner explains to us the customer stories and all the use cases. The team now has the chance to ask questions about them to get rid of any ambiguity to explain.

The team now start measuring effort using the poker planning process. When the calculation of effort is completed, the user stories are allocated to individual team members and the work begins.

Team members can always add new user story or mission after the meeting, if they consider anything within a sprint. Group leaders will talk to the owner of the company if newly discovered work does not seem to be part of the strategy originally.

2. Daily Scrum or Stand-up

An important sync meeting in both the methodologies Scrum and Kanban. It is an agile ceremony which the Scrum Master conducts for the Development Team. The Product Owner and the stakeholders can take part in this meeting to address the development team 's questions. This meeting is usually held at the same place each day, and generally in the morning. The Stand-up goal is to keep everybody on the same page.

Each team member is being required to answer 3 questions:

What did I do yesterday?

So what am I going to do today?

Are there any barriers to keeping up with work?

The regular stand-up can be seen as an informal meeting that does not exceed 15 minutes. For info, see Guide to conduct regular scrum effectively.

3. Sprint/Iteration Review

An agile assembly orchestrated by Design Team, Scrum Master, and Brand Owner, where the stakeholders can also be invited. Iteration Analysis seeks to demonstrate the progress the team has done in the last sprint. Meetings can be informal or formal depending on the needs of the team. Scrum Master needs to schedule this session well in advance to ensure that stakeholders who can provide valuable input on the sprint demo can participate. The team should expect to receive input from the stakeholders after providing demonstrations of the work progress. Usually sprint analysis session takes 1-2 hours.

4. Sprint Retrospective

An agile ceremony that took place after meeting with Sprint Analysis which normally takes an hour. Scrum Master, Brand Manager, and Design Team are partners. The meeting's goal is to find out what went well in the last iteration, and what did not. The team is trying to figure out what problem affects development. All the participants give feedback in writing. The team seizes this session as an opportunity to change. When there are various types of problems then the team should pick the three most voted issues and discuss them together to find their solution.

To assess how the team worked and what causes caused it to lose competitiveness, it is to reflect upon the recent iteration. The team should expect to strengthen the processes after retrospective review, and be on the road of development for the future.

In Debug BD my supervisor attended all the meetings and later assigned me the task I am scheduled to accomplish. As an intern I did not attend any company meeting directly.

The Sprint Planning meeting takes place when a new project starts and it takes up several hours to decide how the project will be completed and work distribution.

The Daily Scrum meeting takes it place every morning and takes from 20 minutes upto 1 hour. The progress and road blocks are discussed in this meeting. Only The project manager and the team leaders attend this meeting.

Sprint Review meeting takes place when a print is completed. The whole development and features are the topic of this meeting. Sometimes the client is also attends this meeting.

In debug BD the sprint planning meeting is attended by the product owner, ScrumMaster and the entire Scrum team. These meetings can last for several hours. Sometimes outside stakeholders also attend by invitation of the team. During the sprint planning meeting, the product owner describes the highest priority features to the team. The team asks enough questions that they can turn a high-level user story of the product backlog into the more detailed tasks of the sprint backlog. A detailed planning of work flow, distribution and timeline is important part of this meeting. The upcoming meetings like daily scrum, iteration review or sprint retrospective are held to supervise the process of development , backlog overcome and adding features if needed.

Roles in Sprint

Agile teams are operating with a sense of urgency which is difficult to match. This is because their core value is to adapt to change. They know how quickly the tech industry is heading in today. So, they use adaptive planning to practice the production of dynamic applications. And each role on an Agile team helps to build a cohesive whole. These team members also have different roles. And depending on the methods used, these positions may have different names. Still, certain positions are relatively common. And it's necessary to know how they can contribute.

Common Agile roles include the following:

Team Lead, Scrum Master (Scrum), Team Coach, or Project Lead

Acts as the coach responsible for organizing and directing the team, having support when needed, and eliminating barriers that prevent the team from doing their job. The position of Scrum Master often involves soft project management skills rather than planning and technical skills, which are also left to the entire team. It's important to remember this person isn't always the manager of the team. Instead, the position should represent awareness and responsibilities through the level.

Team Member

Responsible for designing and implementing the Plan. Members of the team would usually consist of developers, QA, and documents. They 're responsible for preparing, designing, creating, reviewing, and implementing projects.

Product Owner (Scrum), On-Site Customer (XP), Active Stakeholder

Represents the customer's opinion and is responsible for the priority backlog and the maximization of investment return (ROI). Part of the accountability for that position involves recording user stories or project specifications.

Stakeholders

Represents a wide category of individuals who may be customers, product managers, logistics, help, fund managers, other based Agile teams, executive team, investors, and more.

In addition to these specific positions, Agile teams may often have expanded cast members who are called upon to provide technical or domain knowledge for certain unique skills that may not be present among the team members. Likewise, to expect product owners to be so-called experts in every facet of a product or domain is not always reasonable or fair. It is when specialized experts are called upon to support the team with other criteria.

In the end, it is a constant quest to develop how teams innovate. And new methodologies will surely arise over time — as well as the best software engineering practices do.

Agile teams will find that there are different strategies available and that specific solutions fit best for them. Yet Agile 's effect on product creation can not be understated, concentrating on the consumer and the art of teamwork.

User Story

A user story is the tiniest working unit in an agile framework. It is an end goal and not a feature articulated from the viewpoint of the app user. The aim of a user story is to express how a piece of work returns the customer with a particular value. Notice that in the conventional sense, "customers" need not be external end-users, they may also be internal customers or colleagues within your company who rely on your team.

A user story is a tool used in the development of Agile software to capture a summary of a software function from an end-user perspective. The story of the user explains what sort of user they like, and why. A user story helps build a concise feature definition that can fit into Agile systems such as Scrum and Kanban.

The aim of a user story is to write down how a project returns the value for the user. It is then the responsibility of the development team to take care of how to build the application which will fulfill the user story requirements. In best-case scenarios, developers collaborate closely with the business owners and stakeholders to clarify the details as the code gets developed.

User stories do not substitute data on use cases or technical specifications. Instead, software developers writes user stories to help prioritize how features should be applied to a project overtime period of the project. A user story can be used as a starting point for a discussion that sets out the real criteria for the product.

Characteristics of a user story

A user story template often follows the same format. The three components of a user story are:

Who- This is typically a job role, customer, or type of user, also known as the user persona.

What- This is the goal that the user wants the product to accomplish or implement.

Why- This is the reason why the user needs the feature or functionality.

The result is “As a <who>, I want <what> so that <why>.” Further detail can be added to a user story by breaking it into smaller user stories and grouping them into themes.

An Agile user story is meant to be short, usually fitting on a sticky note or note card. The user stories should be written by the business in the language of the customer so that it is clear to both the business and the development team what the customer wants and why they want it.

In some cases, a unique identifier and an effort/priority level are also assigned to the user stories. Usually, the unique identifier is a number and allows developers to keep track of how many user

stories there are and when they're done. The effort or priority level is more specific to the team but is usually a range that shows how long the feature will take, how many developers it will need, or how many specifications the feature has.

Finally, the user stories should be related to predefined acceptance criteria. Acceptance criteria are used to identify a user story's boundaries and what needs to be done to ensure the story is considered complete. This may also include any tests needed to validate a user's story.

Benefits of user stories

User stories provide development teams with important context before a project even begins. They emphasize the user and focus on solving real situations a customer might face. This can help development teams think more critically and creatively. Additional benefits of using user stories include:

- Increased visibility and collaboration across the development team.
- Better use of customer or end-user feedback.
- It can save time when prioritizing the development of requirements and functionality.
- It helps avoid restrictions that occur when specification details are defined too early on.
- Higher clarity around business value and delivering products that end-users need.

User stories are prioritized based on 3 main points.

- Customer Benefit
- Opportunity Size
- Competitive Positioning

Customer Benefit: Think of the story/feature from a client's point of view. And evaluate its significance on the subsets below

Level of need: From a customer’s standpoint what do you think is the level of need of this story? Does it solve a major pain point? Or does it solve a moderate problem or only a minor annoyance?

Frequency of need: How frequently would this feature be used? Often or rarely?

Opportunity Size: For a product manager it is important to think of all potential customers who might be using your product and not get trapped by focusing just one set within your target market.

And think about how many customers you think this particular feature will be useful to, and what's the value of those customers who will be affected. You might assume, for example, that less than 10 percent of your customers would be affected, and none of them are major customers, or you might believe that more than 50 percent would be affected and all of them are major customers.

Competitive Positioning: Evaluate stories centered on Consumer feedback and distinction. Those stories give you a strong distinction from current industry solutions. But although they do have distinction it may not be used by many. Thus, these reports on competitive positioning would have a low ranking. Although there may be stories that provide substantial distinction or consumer response may also be small.

There are two areas where user stories affect the planning process on agile projects:

1. **Scheduling**. It depicts an agile change management process in which work items, including stories, are dealt with in priority. The implication, then, is that when the work is done to implement that requirement, the priority assigned to a story affects. As discussed above, the responsibility for prioritizing specifications lies with project stakeholders. Note that a numerical prioritization method was implemented (maybe on a scale from 1 to 20) while a MoSCoW (Must Should May Won't) approach was employed. Stakeholders do have the right to identify new requirements, change their minds about existing requirements, and even make requirements reprioritized as they see fit. However, stakeholders do need to be accountable for prompt decision making and information provision.
2. **Estimating**. Developers are responsible for estimating the effort needed to implement the things they're going to be working on including stories. The idea is that because we can only do so much work in an instance, the size of the work items (including stories) can influence when dealing with certain work items. While you might be afraid developers don't have the requisite estimating skills, and this is always true at first, the truth is that it doesn't take long for people to get pretty good at estimating when they know they will have to live up to those estimates. When you have followed the method of pair programming then two people have to be able to execute a user story in a single iteration/sprint. Therefore, if you work in one-week iterations every user story will explain the work worth less than a week. Naturally, if you don't take a non-solo creation approach like pair programming, the user story will need to be implemented within a single iteration by a single individual. To satisfy these conditions, big tales, also called epics, will need to be split up into smaller stories.

In debug BD the project manager mainly helps to create the user stories. The product owner in some cases the stake holders and the project manager indulge in a detailed discussion about the product, the features of the product, targeted audience, future possibilities. They discuss every aspect of the product and its features in order to get a clear idea about the clients need and their priority levels. Sometimes the scrum master and other team members also join the meeting and contributes in the process of making a prioritized user story for the Product.

Version control

Git is a widely used tool for version controlling. Git ensures proper version controlling facilities to the developers. Generally, a master repository available in Git which can be considered as production code. If new requirement comes or need to fix bugs then new branch is created from the master repository. After development developer push the code. If the development is ok then developer create a marge request to his team leader or other senior developers. After reviewing the code, the assigned person merges the code in master repository.

To publish changes to the official project, developers "push" their local master branch to the central repository. This is the equivalent of svn commit, except that it adds all of the local commits that aren't already in the central master branch.
First, someone needs to create the central repository on a server. If it's a new project, you can initialize an empty repository. Otherwise, you'll need to import an existing Git or SVN repository.

Central repositories are often created through 3rd party Git hosting services like Bitbucket Cloud or Bitbucket Server. The process of initializing a bare repository discussed above is handled for you by the hosting service. The hosting service will then provide an address for the central repository to access from your local repository.
Next, each developer creates a local copy of the entire project. This is accomplished via the git clone command.

When a repository is being cloned, Git automatically adds a shortcut called origin that points back to the "parent" repository, under the assumption that you'll want to interact with it further on down the road.
Once the repository is cloned locally, a developer can make changes using the standard Git commit process: edit, stage, and commit. If you're not familiar with the staging area, it's a way to prepare a commit without having to include every change in the working directory. This lets you create highly focused commits, even if you've made a lot of local changes.
Once the local repository has new changes committed. These changes will need to be pushed to share with other developers on the project. This command will push the new committed changes to the central repository. When pushing changes to the central repository, updates from another developer may have been previously pushed that contain code that conflicts with the intended push updates. Git will output a message indicating this conflict. In this situation, the git pull will first need to be executed. This conflict scenario will be expanded on in the following section.
The central repository represents the official project, so its commit history should be treated as sacred and immutable. If a developer's local commits diverge from the central repository, Git will refuse to push their changes because this would overwrite official commits.
If local changes directly conflict with upstream commits, Git will pause the rebasing process and give you a chance to manually resolve the conflicts.

The Difference Between Git and SVN

Git	svn
Git software is installed on a workstation and acts as a client and a server. Every developer has a local copy of the full version history of the project on their machine. Git changes happen locally. So, the developer doesn't have to be connected all the time. Once all the files are downloaded to the developer's workstation, local operations are faster.	SVN has a separate server and client. Only the files a developer is working on are kept on the local machine, and the developer must be online, working with the server. Users check out files and commit changes back to the server.
Git branches are only referencing to a certain commit. They are lightweight — yet powerful. You can create, delete, and change a branch at any time, without affecting the commits	SVN branches are created as directories inside a repository. This directory structure is the core pain point with SVN branching. When the branch is ready, you commit back to the trunk.
By default, Git assumes that all the contributors have the same permissions.	SVN allows you to specify read and write access controls per file-level and per-directory level.
Git's distributed nature allows anyone to change any part of their local repository's history. Changes are tracked at a repository level. Although pushing a changed history is heavily discouraged, it can happen. This causes problems if other developers are relying on particular changes.	With SVN, the repository's change history is pretty consistent. To make any change to the repository's history, you need access to the central server. Changes are tracked at the file level.
Git repositories can't handle large binary files.	SVN repositories can handle large binary files, in addition to code. Storing large binary files in SVN would take up less space than in Git.

Unit testing

Unit testing is a software test level, where individual software units/components are tested. The aim of this is to validate that each software unit performs as intended. A unit is the smallest component of any device which is testable. It normally has one or more inputs and typically a single output. A unit can be an individual program, method, process, and so on in procedural programming. The smallest unit in object-oriented programming is a method that may belong to a base/super class, abstract class, or child / derived class. (Some view an application module as a unit. This should be avoided because there are likely to be many individual units within the module.) Unit testing systems, drivers, stubs, and mock/fake artifacts are used to assist in unit testing. In Debug Bd unit testing is performed manually. The quality assurance team trial runs the program with every possible input and match the expected output before releasing it. When The quality assurance team is satisfied with the development and outcomes then they the approve the software for the next level.

Internship Activities

A brief discussion is added below of my internship.

❖ **Week 01**

Task	Upcoming Task	Roadblocks
The First task is to get familiar with the office protocols, needed software's, rules and regulations.	Upcoming task is to get comfortable with my office supervisor and get instructions.	I Got familiar with the with the office, its rules and way of working, a lot of things were new to me.
I have met my supervisor he gave me a clear understanding of what I have to do and what I need to learn which software's I need.	My next day task is to install all the needed software's and get familiar how they work.	I have to learn about a several software and a new language which is completely new and overwhelming to me.
successfully installed android studio and created a virtual device	My next task is to implement flutter to android studio and install the plugins	Android studio is a very large application and requires a lot of computer configuration.
I have implemented flutter platform with android studio and configured all the plug-in and I understood the workplace of flutter and how it creates the cross-platform applications	My next task is to learn about the language called Dart.	Implementing Flutter was a very hard task
Took a short tutorial on flutter dart I learned the basic rules, syntax and the similarities and dissimilarities with other language and syntax	My next task will be to learn how to code in Dart language in the Flutter application.	Dart is similar to C language but it gets complicated with lots of class and widgets.

❖ Week 02

Task	Upcoming Task	Roadblocks
I studied online tutorials and followed video tutorials and I gained have more clear understanding of Dart and how to use that on Flutter.	Upcoming task is to follow some documents and tutorials on flutter and dart app development.	Learning a new language is a very big challenge. I having facing trouble remembering the syntax.
I came across the parts and types of android app and their needed structure and I Got familiar with the android base widgets, classes and their use and importance.	My next day task is to learn about widgets and classes that are used in flutter.	In android it is all about widgets and class it's a bit tricky to understand.
I studied the dart language and its importance on widgets and class derivation and these implementation on Flutter and I understood the workplace of flatter and how it creates the cross-platform applications.	My next task is to start making simple app with text lines.	How flutter uses those widgets to differentiate different parts of the application is confusing.
I have created a very basic app with some texts and simulated on the virtual android device and I learned the initial way to create an app showing texts.	My next task is to learn making simple app with text lines and simple non-responsive buttons.	I did not understand a few header files properly.
I have created a very basic app with some texts and simulated on the virtual android device and I learned the initial way to create an app showing texts and a floating button. I also learned how to add text inside a button.	My next task is to learn all about the scaffold widget and the child properties of the scaffold widget .	The process of adding buttons and insert text in nested type function was hard to understand.

❖ Week 03

Task	Upcoming Task	Roadblocks
I learned about the Scaffold widget and how to add children widget to it as text and buttons.	Next task is to Changing Colors of the app-bar, main window and buttons.	I found it very difficult differentiating between classes and widgets.
I used the colors function for Adding colors on App bar, Background	The next day I will Work with Fonts and its properties.	I had problem Finding the exact color code and their compatibility.
I used the fonts function for Changing the current font and adding custom fonts from the computer.	The next task is to get familiar with the Stateless Widget and its applications.	Adding a custom font was very difficult because of all the new location address and adding them on pubspec.yaml file.
I declared a StatelessWidget Function called Home for Making home screen as a stateless widget.	My next task is to Add Background Images to the Home Screen.	I found it difficult to Understand Types of widgets regarding their responsiveness
I learned how to change the background from white to an image from internet or image from local directories.	My next task is to learn about Icons, Buttons and to add actions.	For local images their name calling, location and addition in pubspec.yaml file

❖ Week 04

Task	Upcoming Task	Roadblocks
I learned all about icons, how to add different icons, changing colors.	Upcoming task is about learning all about buttons and adding on-pressed task.	I found difficulties finding exact names for predefined icons and I could not add custom icons.
I learned everything about adding buttons and using icons as buttons. I also added the basic on-pressed action as increasing integers.	Next task Is to learn about container widget.	I found it very difficult to use icons as buttons, there were so many widgets.
I learned about the container widget, how to change color, text and add padding to its sides.	Next task is to learn about Row operations.	I found the measurements of add padding very confusing.
Using a row, I learned how to have several buttons, containers and icons. I also learned to align then in the row. I also used the main-axis, and cross-axis alignment to align the row contents .	Next task is to learn about column operations.	Aligning the contents and adding padding to them was very confusing to measure.
Using a column, I learned how to have several buttons, containers and icons. I also learned to align then in the column. I also used the main-axis, and cross-axis alignment to align the column contents.	Next task is to learn about using row and column operations together.	Aligning the contents and adding padding to them was very confusing to measure.

❖ Week 05

Task	Upcoming Task	Roadblocks
I have learned to create a complete app window. I have used the stateless widget to make the window. I have added a added a app bar with a title using the scaffold widget along with the AppBar as child widget. I have used Child text widget to add Text contents to the window. I have leraned to use the the text widgets nested in a Column ooperation. The column operation keeps the texts in line and organaized. I have also used many text style editing commands to change the outlooks of the texts. I have integrated Fontsize , Letterspacing , Colors in the Text widget as child widgets. All the texts are aligned along the axis.	In the next task I will create a app window with both column and row operation in one window. I will use not only the texts but also the buttons, icons, text blocks. I will also arrange the buttons with the texts.	Due to the coronavirus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. Its very difficult to maintain communication and learn along with the process. I have faced several problems creating the window because of poor communication.

❖ Week 06

Task	Upcoming Task	Roadblocks
I have learned to create a complete app window with different rows and columns. I have used the stateless widget to make the window and added Row and Column option. I have added an app bar with a title using the scaffold widget along with the AppBar as child widget. I have added Flat buttons. I have learned to use the text widgets inside a Button. I have also used icons along text having textstyle editing commands to change the outlooks of the texts. I have managed the sizes and color of the box and the text colors inside them. I have used the mainAxisAllignment and crossAxisAllignment to align the buttons.	In the next task I will create a app window with images. I will learn to add background image. How to add logo image. I will learn how to crop and shape an image and show them with the names. How to add personal avatar or picture with texts.	Due to the corona virus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. It is very difficult to maintain communication and learn along with the process. I have faced several problems creating the window because of poor communication. Using both row and column was very confusing. It took a lot of tome to arrange them.

❖ Week 07

Task	Upcoming Task	Roadblocks
I have learned to create a complete app window with images, texts and buttons. I have learned to edit the pubspec.yaml to make the app window compatible with images. I have also learned to add images in the assets folder so the the program can fetch the images if needed. I have added background image to my window. I have also learned how to add images in expected size over the text as logo. I have also created personal avatar in circular shape with the text with proper alignment and radius. I have used padding and padding:EdgeInsets.fromLTRB to add the image properly.	In the next task I will create a app window with the stateful widget. The stateful widget makes the app window interactive. This window with help to work with the value changing integers and will also be able to show the changed values as outputs.	Due to the corona virus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. It was very difficult to maintain communication and learn along with the process. I have faced several problems creating the window because of poor communication. Setting the image in the right place was very hard. Measuring with pixels were very confusing to find the right placement.

❖ Week 08

Task	Roadblocks
I have learned to create a complete app window with stateful widget. Stateful widget help to create an interactive window which can show changeable data inputs. I have added a button to the window with press capability in the OnPressed command option. I have also added a data field to show the integer. The newly added floating action button responses to a touch and increases the integer with one and instantly shows is the designated data field. I have also used nested child functions to add text and icon inside the button and change the background color of the button. I have used the setState widget so that the window refreshes the data every time the button is pressed. I have also added other parts such as an app bar with title, other texts in the main body to make the window better.	Due to the coronavirus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is a very tough task. It was very difficult to maintain communication and learn along with the process. The stateful widget was new and a bit different from a stateless widget. The on-press action was not working normally, the integer was increasing but not showing the change. Then had to use the setState Widget to make the window dynamic to change.

Reflection

My Experience

My internship at Experience has taught me more than I could have imagined. As the Ap development Intern at Debug BD, I feel my duties were diverse, and ever-changing. Sometimes it's tough to recall everything I have taken in over the past months, but I feel that these are some of the most beneficial lessons I have learned.

Coming into this position, I felt that I had no idea where my career was going and I lacked confidence about what I could do and what I am really good at. My internship has definitely given me a better understanding of my skill set and where my career may take me, but most importantly, I've come to learn that I am not alone. This job has taught me that almost everybody is in the same position. Very few undergraduate students know what they want to do, and it is something that is simply not worth worrying about. Thanks to my I know that if I continue to work hard things will fall into place.

I frequently collaborated with other Engineers, Product Managers, and Designers from around the company, and I even helped on board some of my full-time teammates onto parts of the codebase where they needed more clarity.

Throughout my internship, I was often encouraged to think about my work as it related to the team's goals, rather than my own individual output. Writing code can sometimes feel like a solo endeavor, but at Asana I learned that effective engineers can cost and prioritize different pieces of work, and do them in a way that can be built upon by other engineers with minimal friction.

Comparison between academia and industry

I have learned about software or application in the university. Most of my software development knowledge was obtained from the Academy. Much of it came from my course in software creation and study, where I spent a significant part of my time learning about different software design methods, design patterns, and software tests. I have gained practical knowledge by completing an academic project for my courses in junior capstone development and software development. But this was a lot different when I entered the industry. During my academic classes, I had been introduced to source version management. Yet when I started working at Debug BD, the process was very different. We split the project into the production, staging, development, feature additions, bugfix branches. We never kept the information on version control and it took me a while to get used to this new framework. We always had small groups in our academic ventures and always tried to incorporate agile processes to the best of our knowledge. But we never properly enforced a set of criteria, issuing prioritization and scrum. Much of that went very differently at Debug BD. We have a regular scrum where, if any, we discuss our developments, plans, and blockers. Each day we think of new criteria coming in from customers. The remaining problem tickets are also given priority by the team lead based on their significance.

In sum up, during my internship, a lot of the stuff I heard about during my university courses appeared. Although when we worked on our academic projects we were very lenient about these issues, such leniency will not work for large-scale projects. When you start working on such a large project, the value of sound software development practices becomes very evident and all the theoretical theories eventually begin to make sense.

How does this influence my career?

Internship is the basic step for a professional career. Internship is a different world from university. It is a platform to learn practically. You can have a new experience and new tasks to seek. It is not possible to estimate the practical situations while studying in a classroom, an internship is a platform where one can get huge stuff to learn and the best chance to handle the situation. They allow us to practice and your work will be cross-checked by them so that we can try and even if you fail at something, we get the opportunity to learn from it and can improve yourself to give best. Making professional connections is a crucial part of getting started on your career path. During my internship, I have tried and got to know as many people working there as possible. Take an interest in those you work with, even if all you have time for is a 'Hello, how are you?' or 'Goodbye, have a great night'. You want to leave a lasting impression on people so that they remember you.

Conclusion

The internship program is a great opportunity for us because it enables us to learn about the industry and various practices. It also teaches us about the various skills needed to work in an office with other employees. It offers something we can never learn inside a classroom setting. I had enjoyed my time at Debug BD and learned a lot of things that will help me build my career and also enhance my academic learning. I managed to put a lot of theories I learned in class in practical applications. Moreover, I have made valuable contacts in the industry and enriched my network greatly. I came to know regarding different tasks and processes of project management learned a variety of new technologies and along with many skills that are essential for building a career and provide a competitive advantage to me than others to do work in project management in the future. I am grateful to my institute, North South University for providing me quality education and knowledge throughout these years.

Appendix

1. Debug BD Website:

    http://debugbd.com/

2. FORM ID: INT.EVAL.001

    Intern Evaluation Form

3. FORM ID: LOAF.001

    Student Learning and Outcome Achievement Form

4. Weekly Reports

    Week 01

    Week 02

    Week 03

    Week 04

    Week 05

    Week 06

    Week 07

    Week 08

CSE498R/EEE498R/ETE 498R

Intern Evaluation Form

Department of Electrical and Computer Engineering
School of Engineering and Physical Sciences (SEPS)
North South University, Bashundhara, Dhaka-1229, Bangladesh

Student's Information

Student's Name	Ishtiak Ahmed
Student ID	153 0494 042
Contact Number	0179 8144684

Evaluator's Information

Name	Md. Tanzilur Rahman
Company/Organization	Debug BD Ltd
Office address	Haveily Complex, Ka/6 Bashundhara Rd, Dhaka 1229
Contact Number	019 81995317
Email address	tanzil@debugbd.com

Internship Details

Number of Weeks Worked	8
Number of Hours Worked	320

Evaluation Criterion:

The following skill sets and performance indicators will be rated by the industry evaluator.
Scale: *5=Excellent, 4=Above Average, 3=Average, 2=Below Average, 1=Poor, NA=Not Applicable*

Criteria	Scale					
	5	4	3	2	1	NA
1. Quality of assigned work received	✓					
2. Quality of written communication skills	✓					
3. Quality of oral communication skills	✓					
4. Quality of computer/technical skills	✓					
5. Ability to work with others	✓					
6. Attendance & punctuality	✓					
7. Professional demeanor	✓					
8. Professional appearance	✓					
9. Quality of computer/technical skills	✓					
10. Use of time management skills	✓					
11. Judgment/decision making skills	✓					
12. Adaptability& Flexibility	✓					
Total Score:	60					

What are the intern's greatest strengths?

Ishtiak Ahmed is a very confident person with dedication. He showed commitment to work in a group and came up with innovative ideas and solutions for provided problem tasks.

In what areas does the intern need to improve?

Ishtiak Ahmed showed excellecnce in a lot of fileds. Suddenly working in a organaization can be overwhelming. Sometimes the work is monotonious, he needs to learn work under every situation and grow more communication skill. I am sure he will overcome this in near future.

Would you consider this intern for a permanent position?

yes

Would you be willing to supervise additional NSU Engineering Interns?

yes

Tasrbun Rahman 15,may,2020

Evaluator's Signature & Date

Form ID: LOAF.001

CSE498R/EEE498R/ETE 498R

Student Learning and Outcome Achievement Form

Department of Electrical and Computer Engineering
School of Engineering and Physical Sciences (SEPS)
North South University, Bashundhara, Dhaka-1229, Bangladesh

Student Name:	ISHTIAK AHMED
Student ID:	153 0494 042
Name of Organization:	Debug BD LTD
Duration of Internship:	8 weeks
Student's Feedback:	I finished my 8 week long Debug BD Ltd internship. I learned a lot of new information and confirmed a lot of the information that the books acquired. This was a good way to get to know the procedures in the industry. Debug BD have an incredible team that encouraged me to grow as an App developer. This has been a very fruitful internship experience for me.
What were the objectives of your internship and did the internship help you to achieve them?	The internship was aimed at acquiring first-hand understanding of the business processes and learning about the cutting edge innovations that are being used in the industry today. I had the opportunity to research and contribute to a project that uses cross platform technology to give customers best application solution. To accomplish this mission I have had to use some of the new and strong technologies. So, I think this internship program has helped me achieve my goals.
What aspects of the internship did you enjoy most?	Entering the industry was a barnd new experince for me, I was unfamiliar with a lot of the company's best standards and procedures. But the other workers were extremely helpful and polite. They helped me get all the new stuff started and gave me time and space to get acquainted with these activities. I got to see hands on the use of concepts and strategies for Application development.
Did this internship extend the academic support?	Yes, they did. I had the ability to see lots such hypotheses come alive in my everyday routine such work. I loved seeing patterns of design, the Object oriented programming principles at use . First time putting my theoretical experience into practice has been exciting.

16 MAY, 2020

(Name and Signature of the Student with Date)

CSE498R
Spring 2020

WEEKLY REPORT

Week 01 (14 February - 20 February)

Ishtiak Ahmed

153 0494 042

Date: 21st February,2020

DATA

Date	Today's Task	Tomorrow's Task	Roadblocks
14th February, 2020	Today's task is to get familiar with the office protocols, needed software's, rules and regulations.	Tomorrows task is to get comfortable with my office supervisor and get instructions.	I Got familiar with the with the office, its rules and way of working, a lot of things were new to me.
15th February, 2020	I have met my supervisor he gave me a clear understanding of what I have to do and what I need to learn which software's I need.	My next day task is to install all the needed software's and get familiar how they work.	I have to learn about a several software and a new language which is completely new and overwhelming to me.
16th February, 2020	successfully installed android studio and created a virtual device	My next task is to implement flutter to android studio and install the plugins	Android studio is a very large application and requires a lot of computer configuration.
17th February, 2020	I have implemented flutter platform with android studio and configured all the plug-in and I understood the workplace of flutter and how it creates the cross-platform applications	My next task is to learn about the language called Dart.	Implementing Flutter was a very hard task
18th February, 2020	Took a short tutorial on flutter dart I learned the basic rules, syntax and the similarities and dissimilarities with other language and syntax	My next task will be to learn how to code in Dart language in the Flutter application.	Dart is similar to C language but it gets complicated with lots of class and widgets.

CSE498R
Spring 2020

WEEKLY REPORT

Week 02 (22 February - 27 February)

Ishtiak Ahmed

153 0494 042

Date: 01st March,2020

DATA

Date	Today's Task	Tomorrow's Task	Roadblocks
14th February, 2020	I studied online tutorials and followed video tutorials and I gained have more clear understanding of Dart and how to use that on Flutter.	Tomorrows task is to follow some documents and tutorials on flutter and dart app development.	Learning a new language is a very big challenge. I having facing trouble remembering the syntax.
15th February, 2020	I came across the parts and types of android app and their needed structure and I Got familiar with the android base widgets, classes and their use and importance.	My next day task is to learn about widgets and classes that are used in flutter.	In android it is all about widgets and class it's a bit tricky to understand.
16th February, 2020	I studied the dart language and its importance on widgets and class derivation and these implementation on Flutter and I understood the workplace of flatter and how it creates the cross-platform applications.	My next task is to start making simple app with text lines.	How flutter uses those widgets to differentiate different parts of the application is confusing.
17th February, 2020	I have created a very basic app with some texts and simulated on the virtual android device and I learned the initial way to create an app showing texts.	My next task is to learn making simple app with text lines and simple non-responsive buttons.	I did not understand a few header files properly.
18th February, 2020	I have created a very basic app with some texts and simulated on the virtual android device and I learned the initial way to create an app showing texts and a floating button. I also learned how to add text inside a button.	My next task is to learn all about the scaffold widget and the child properties of the scaffold widget .	The process of adding buttons and insert text in nested type function was hard to understand.

CSE498R
Spring 2020

WEEKLY REPORT

Week 03 (01 March - 05 March)

Ishtiak Ahmed

153 0494 042

(Date: 06th March,2020)

DATA

Date	Today's Task	Tomorrow's Task	Roadblocks
08th March, 2020	Today I learned about the Scaffold widget and how to add children widget to it as text and buttons.	Next task is to Changing Colors of the app-bar, main window and buttons.	I found it very difficult differentiating between classes and widgets.
09th March, 2020	I used the colors function for Adding colors on App bar, Background	The next day I will Work with Fonts and its properties.	I had problem Finding the exact color code and their compatibility.
10th March, 2020	I used the fonts function for Changing the current font and adding custom fonts from the computer.	The next task is to get familiar with the Stateless Widget and its applications.	Adding a custom font was very difficult because of all the new location address and adding them on pubspec.yaml file.
11th March, 2020	I declared a StatelessWidget Function called Home for Making home screen as a stateless widget.	My next task is to Add Background Images to the Home Screen.	I found it difficult to Understand Types of widgets regarding their responsiveness
12th March, 2020	I learned how to change the background from white to an image from internet or image from local directories.	My next task is to learn about Icons, Buttons and to add actions.	For local images their name calling, location and addition in pubspec.yaml file

CSE498R
Spring 2020

WEEKLY REPORT

Week 04 (08 March - 12 March)

Ishtiak Ahmed

153 0494 042

(Date: 14th March,2020)

DATA

Date	Today's Task	Tomorrow's Task	Roadblocks
08th March,2020	I learned all about icons, how to add different icons, changing colors.	Upcoming task is about learning all about buttons and adding on-pressed task.	I found difficulties finding exact names for predefined icons and I could not add custom icons.
09th March,2020	I learned everything about adding buttons and using icons as buttons. I also added the basic on-pressed action as increasing integers.	Next task Is to learn about container widget.	I found it very difficult to use icons as buttons, there were so many widgets.
10th March,2020	I learned about the container widget, how to change color, text and add padding to its sides.	Next task is to learn about Row operations.	I found the measurements of add padding very confusing.
11th March,2020	Using a row, I learned how to have several buttons, containers and icons. I also learned to align then in the row. I also used the main-axis, and cross-axis alignment to align the row contents .	Next task is to learn about column operations.	Aligning the contents and adding padding to them was very confusing to measure.
12th March,2020	Using a column, I learned how to have several buttons, containers and icons. I also learned to align then in the column. I also used the main-axis, and cross-axis alignment to align the column contents.	Next task is to learn about using row and column operations together.	Aligning the contents and adding padding to them was very confusing to measure.

CSE498R
Spring 2020

WEEKLY REPORT

Week 05 (15 March - 19 March)

Ishtiak Ahmed

153 0494 042

DATA

This Week's Task	Next Week's Task	Roadblocks
I have learned to create a complete app window. I have used the stateless widget to make the window. I have added a added a app bar with a title using the scaffold widget along with the AppBar as child widget. I have used Child text widget to add Text contents to the window. I have leraned to use the the text widgets nested in a Column ooperation. The column operation keeps the texts in line and organaized. I have also used many text style editing commands to change the outlooks of the texts. I have integrated Fontsize , Letterspacing , Colors in the Text widget as child widgets. All the texts are aligned along the axis.	In the next task I will create a app window with both column and row operation in one window. I will use not only the texts but also the buttons, icons, text blocks. I will also arrange the buttons with the texts.	Due to the corona virus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. Its very difficult to maintain communication and learn along with the process. I have faced several problems creating the window because of poor communication.

CSE498R

Spring 2020

WEEKLY REPORT

Week 06 (22 March - 26 March)

Ishtiak Ahmed

153 0494 042

DATA

This Week's Task	Next Week's Task	Roadblocks
I have learned to create a complete app window with different rows and columns. I have used the stateless widget to make the window and added Row and Column option. I have added an app bar with a title using the scaffold widget along with the AppBar as child widget. I have added Flat buttons. I have learned to use the text widgets inside a Button. I have also used icons along text having textstyle editing commands to change the outlooks of the texts. I have managed the sizes and color of the box and the text colors inside them. I have used the mainAxisAllignment and crossAxisAllignment to align the buttons.	In the next task I will create a app window with images. I will learn to add background image. How to add logo image. I will learn how to crop and shape an image and show them with the names. How to add personal avatar or picture with texts.	Due to the corona virus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. It is very difficult to maintain communication and learn along with the process. I have faced several problems creating the window because of poor communication. Using both row and column was very confusing. It took a lot of tome to arrange them.

CSE498R
Spring 2020

WEEKLY REPORT

Week 07 (29 March - 02 April)

Ishtiak Ahmed

153 0494 042

DATA

This Week's Task	Next Week's Task	Roadblocks
I have learned to create a complete app window with images, texts and buttons. I have learned to edit the pubspec.yaml to make the app window compatible with images. I have also learned to add images in the assets folder so the the program can fetch the images if needed. I have added background image to my window. I have also learned how to add images in expected size over the text as logo. I have also created personal avatar in circular shape with the text with proper alignment and radius. I have used padding and padding:EdgeInsets.from LTRB to add the image properly.	In the next task I will create a app window with the stateful widget. The stateful widget makes the app window interactive. This window with help to work with the value changing integers and will also be able to show the changed values as outputs.	Due to the corona virus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. It was very difficult to maintain communication and learn along with the process. I have faced several problems creating the window because of poor communication. Setting the image in the right place was very hard. Measuring with pixels were very confusing to find the right placement.

CSE498R
Spring 2020

WEEKLY REPORT

Week 08 (05 April - 09 April)

Ishtiak Ahmed

153 0494 042

DATA

This Week's Task	Roadblocks
I have learned to create a complete app window with stateful widget. Stateful widget help to create an interactive window which can show changeable data inputs. I have added a button to the window with press capability in the OnPressed command option. I have also added a data field to show the integer. The newly added floating action button responses to a touch and increases the integer with one and instantly shows is the designated data field. I have also used nested child functions to add text and icon inside the button and change the background color of the button. I have used the setState widget so that the window refreshes the data every time the button is pressed. I have also added other parts such as an app bar with title, other texts in the main body to make the window better.	Due to the corona virus situation lockdown is imposed. I am unable to attend my office hours. Working remotely and learning is very tough task. It was very difficult to maintain communication and learn along with the process. The stateful widget was new and a bit different from stateless widget. The on-press action was not working normally, the integer was increasing but not showing the change. Then had to use the setState Widget to make the window dynamic to change.