SIES (NERUL) COLLEGE OF ARTS SCIENCE AND COMMERCE

NAAC ACCREDITED 'A' GRADE COLLEGE

(ISO 9001:2015 CERTIFIED INSTITUTION)

NERUL, NAVI MUMBAI – 400706

DEPARTMENT OF COMPUTER SCIENCE

INTERNSHIP

REPORT ON

SOFTWARE DEVELOPER INTERNSHIP

SUBMITTED TO,

UNIVERSITY OF MUMBAI

BY

BANGERA GIRISH ANAND

MASTER OF SCIENCE

COMPUTER SCIENCE

PART - II (SEMESTER - IV)

(2020-2021)

START DATE: 3 MARCH 2021

END DATE: 3 MAY 2021

SIES (NERUL) COLLEGE OF ARTS SCIENCE AND COMMERCE

NAAC ACCREDITED 'A' GRADE COLLEGE

(ISO 9001:2015 CERTIFIED INSTITUTION)

Certificate

NERUL, NAVI MUMBAI - 400706

THIS IS TO CERTIFY THAT

GIRISH ANAND BANGERA

_____

HAS UNDERTAKEN AN INTERNSHIP IN

PELLIGENT LLP

_____

Seat No:_____03_____ In partial fulfilment of MSc - IT / CS Degree (Semester IV) Examination in the academic year __2020-2021_____. It is further certified that he/she has completed 371 hours of the Internship.

External Examiner

Head of Department   Principal

Acknowledgement

The internship opportunity I had with **Pelligent LLP** was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this internship period.

I express my deepest thanks to **Mr. Vishal Zambare** at **Pelligent LLP** for giving me this opportunity. For taking part in useful decision & giving necessary advices and guidance. I choose this moment to acknowledge his contribution gratefully.

Certificate

This is to certify that **Mr. Girish Anand Bangera** of **SIES College, Nerul** worked as an intern as part of her MSc course in Computer Science of University of Mumbai.
The particulars of internship are given below:

Internship starting date: 3rd March, 2021
Internship ending date: 3rd May, 2021
Actual number of days worked: 53 working days (*excluding week-offs*)
Tentative number of hours worked: 371 Hours

Broad area of work:
Intern has worked as a Software Developer Intern. During his course of internship, he contributed software automation & ERD, DFDs & SRS for an inhouse product. He was also later assigned to the Research Department to research on gRPC, Go, Redis, Kafka, Docker, MongoDB, Flutter. He helped the organisation understand the Pros & Cons of each of the technologies and also helped to set-up the environment for the same.

A small description of work done by the intern during the period:
The intern has majorly contributed in the an inhouse product for the educational domain. He was involved in the documentation process of the ERDs, DFDs and SRS and later contributed in the environment setups, also pursed a training on React Native for the purpose of the project. He also helped the organisation develop a software automation tool to ease the environment setup process. He helped the team to research on a set of technologies to be used in the product development cycle.

Recoverable Signature

X _____

Vishal Zambare
Founding Partner
Signed by: 7d25eaf8-4d6d-49bd-bca4-275c6166779d
Contact number: 8806248877
Email: vishalzambare5@gmail.com

Pelligent LLP

2105, Haware Infotech Park,

Vashi, Sector 30A LLPIN:

Professional Evaluation of intern

Name of intern: **Girish Bangera**
College/institution: **SIES College, Nerul**

Sr. No.	Particular	Excellent	VeryGood	Good	Moderate	Satisfactory
1	Attendance	✔				
2	Punctuality		✔			
3	Adaptability		✔			
4	Ability to shoulder responsibility	✔				
5	Ability to work in a team			✔		
6	Written and oral communication skills		✔			
7	Problem solving skills		✔			
8	Ability to grasp new concepts		✔			
9	Ability to complete task		✔			
10	Quality of work done			✔		

Comments:
Girish has showed a fearless but judicial attitude towards picking up on new technologies and researching on the same. He helped cover-up a lot of ground by independently researching on a scale of different technologies and presenting their Pros & Cons. This really helped the organisation to narrow on the choices. He is highly responsible and punctual in his work and is quite adaptable.

Signature:

Recoverable Signature

X ~~~

Vishal Zambare
Founding Partner
Signed by: 7d25eaf8-4d6d-49bd-bca4-275c6166779d

Name: Vishal Zambare
Designation: Founding Partner
Contact number: 8806248877
Email: vishal@pelligent.in

Pelligent LLP

2105, Haware Infotech Park,

Vashi, Sector 30A LLPIN:

Description of the organization

Vision

To build better minds for tomorrow

Mission

To inspire and fulfil collective and creative exponential growth.

Overview

Pelligent LLP is an emerging company that has a vision - To Build Better Minds for Tomorrow.

We innovate, create, and deliver products for product-based organisations. We serve as a PaaS (*Product as a service*) organisation.We expect, provide, fulfil and deliver a continuous learning environment. Our string belief in inculcating collective and collaborative growth of individuals and the company makes us stand apart from our so-called competition.

We provide the following services in our portfolio –

- Automation
- Cloud Native
- Solution Design and Architecture
- Progressive Web Application
- Cross-Platform Development
- IoT
- Event-Driven Design & Development
- Data Engineering and Pipelining

Apart from the above corporate offerings, we only provide our services to other product-based organisations to help them. We are currently in the initial communications phase of securing partnerships for 2 such products. We do also provide services in the educational sectors in the form, not limited to, of –

- Internships
- Faculty Development Programs
- Student Development Programs
- Seminars and workshops
- Guidance and Inputs for Syllabus Redesigns for Autonomous Institutions

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A part of our task force also works in our inhouse product line. We have 2 products in the line which are focussed on the educational sector. As we work in cutting-edge technologies for our product development and operations, we provide ample training and learning resources to our employees to accomplish the task at end and growth with it alongside.

Our Values

- Continuous Learning - We persevere to learn and grow continuously. To us, learning is a never-ending process from the 1st day of life to last. We expect, provide, fulfil and deliver a continuous learning environment.
- Quality - We do it in classes and not in masses. Quality is the key to perfection. We believe that quality comes with understanding, and that comes with continuous learning.
- Simplicity - We encourage simple thinkers and that reflects in our solutions. We value and understand the power of simplicity in the long-run.
- Innovation - We believe and encourage re-inventing the wheel, constructively.
- Clarity - An inspirational and valued thought of a man - There's nothing such as intelligence, there's just clarity and understanding.

Description about the activities done by the section where the intern has worked

Pelligent LLP is internally divided into 3 main sections –

- Product Development
- Service-based offerings
- Educational services

The intern is expected to contribute in the product development section of the firm. As part of her training program to carry out the responsibilities, there shall be 30 days compulsory training period where the intern is expected to complete an assigned certification course. During the time of her internship, following are some of the responsibilities she is expected to carry out –

- Attendance to a daily stand-up meeting as part of the assigned team's SCRUM process is mandatory. The intern is expected to present her previous day's work and discuss on her plan for the day. This meeting is scheduled from Monday to Friday, Saturday being a weekly off for the entire team.
- Every Sunday, there shall be a sprint review meeting to present the week's work/achievement and plan the next week's tasks. Attendance and value-add is mandatory.
- Frequent planning and execution of team-building activities is highly encouraged and participation in such events is promoted.
- The intern will be mentored throughout her work regarding the best practices and delivery.
- The day's work is expected to be documented in a common shared format for tracking purposes. The team uses Trello for work management and the intern is expected to mention her daily work activities at EOD in the assigned task.
- This is to keep a heuristic track record of the project activities/nature for the smooth onboarding of new team members.

Description of work allotted and actually done by the intern

Work Allotted –

- Carrying out research and documentation activities for client engagements and business opportunities.
- UMLs & Documentation for Pelligent App.
- Designing an automated Software installation solution of the organisation.
- Researched on Data messaging platforms such as - Kafka, Redis.
- Helped the team understand containerization, Docker and demonstrated the same.
- Contributed in the Mobile App development team on React Native.

Week 1

Topic:

How to use automate in python and basis program of python

Description:

- Basic study of Python Programs
- Performed different python programs
- Studied how python is used for automation
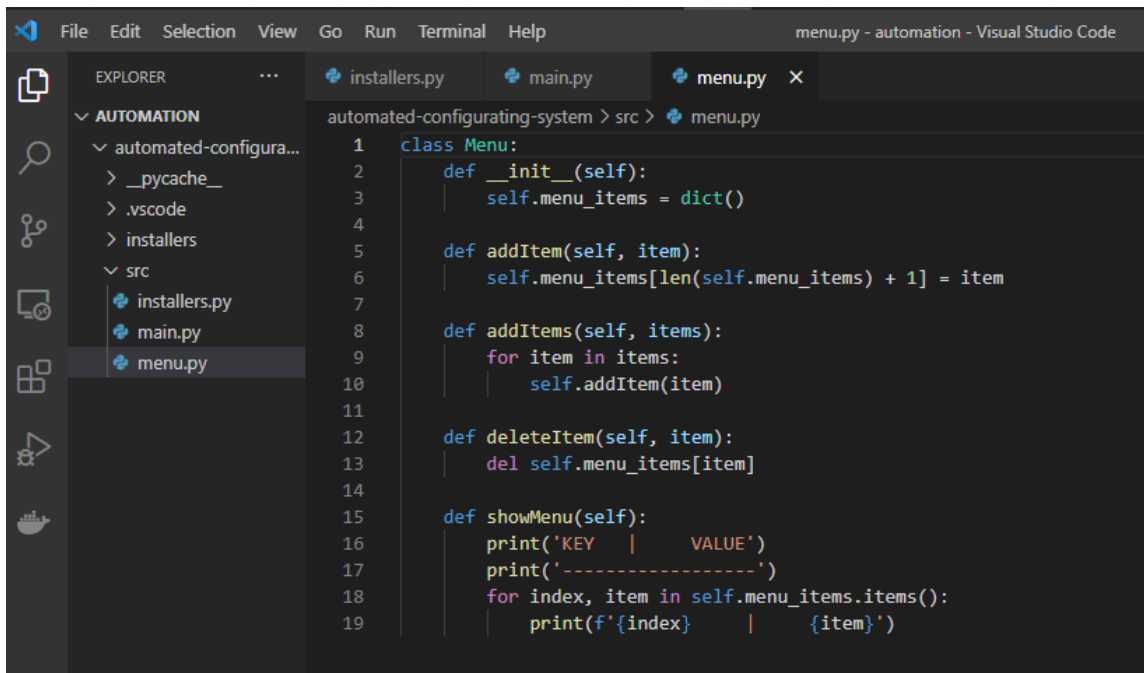
Reference:

- https://python.plainenglish.io/learning-the-fundamentals-of-python-in-2021-f87acdfb83fb
- https://docs.python.org/3/library/argparse.html#module-argparse

```python
class Menu:
    def __init__(self):
        self.menu_items = dict()

    def addItem(self, item):
        self.menu_items[len(self.menu_items) + 1] = item

    def addItems(self, items):
        for item in items:
            self.addItem(item)

    def deleteItem(self, item):
        del self.menu_items[item]

    def showMenu(self):
        print('KEY   |      VALUE')
        print('------------------')
        for index, item in self.menu_items.items():
            print(f'{index}    |     {item}')
```

Week 2

Topic:

Argparse and File handling

Description:

- Studied argparse function and tried program using argparse function
- https://docs.python.org/3/howto/argparse.html
- Installed softwares using command line like PyCharm, VSCode, sublime text, Java JDK, Intellij IDEA
- Created programs and read some articles

Reference:

- https://www.geeksforgeeks.org/file-handling-python/

Week 3-4

Topic:
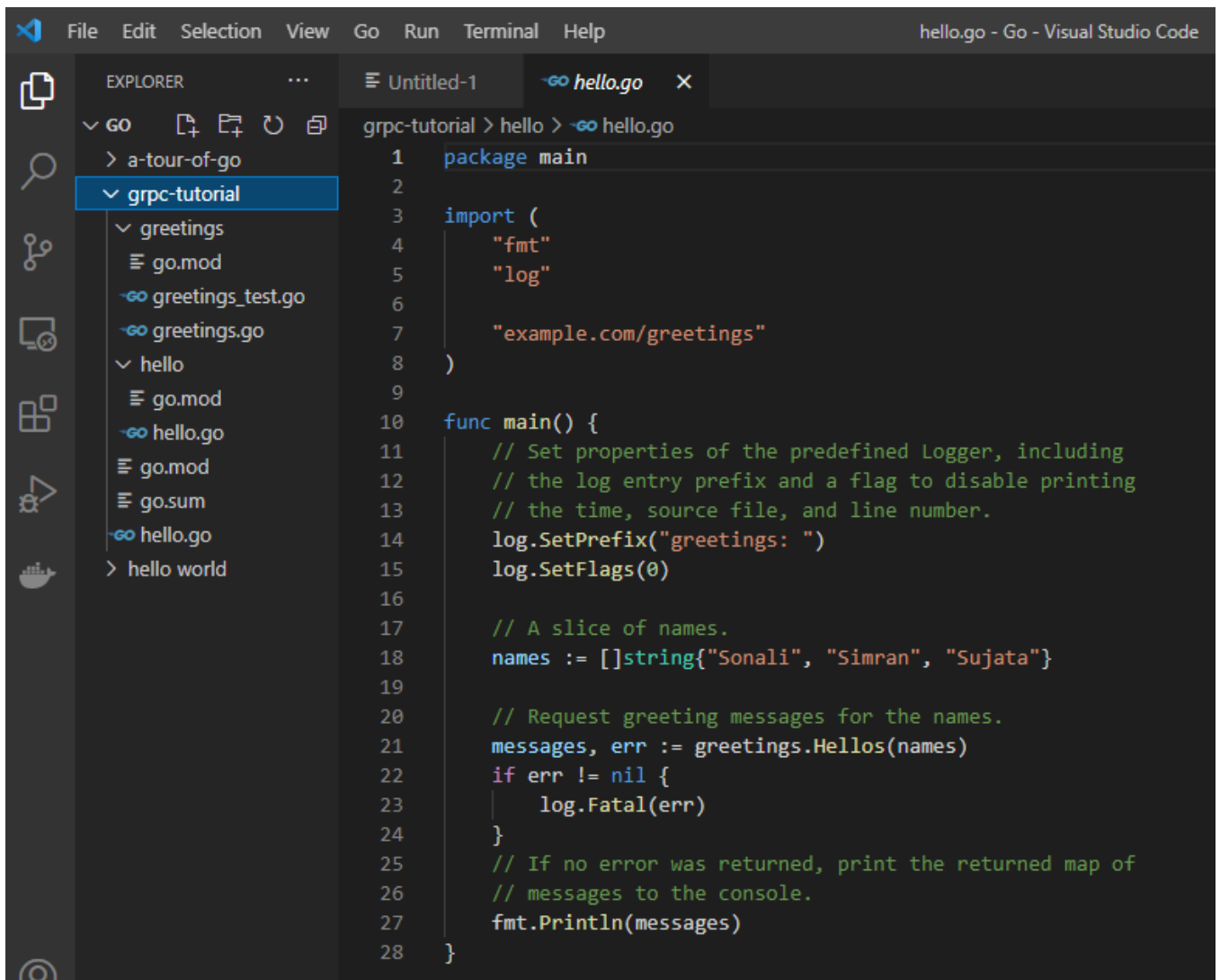
- ER Diagram and SRS Document
- Connecting gRPC to Go language

Description:

- Created ER diagram for Pelligent Application.
- Created SRS documentation for Pelligent Application
- Installation of gRPC and connecting gRPC to Go Language

Reference:

- https://grpc.io/docs/languages/go/basics/
- https://app.diagrams.net/#G1UPGKnqz3XDLO5nqeJeCtxdaazjTCIif2

```go
package main

import (
    "fmt"
    "log"

    "example.com/greetings"
)

func main() {
    // Set properties of the predefined Logger, including
    // the log entry prefix and a flag to disable printing
    // the time, source file, and line number.
    log.SetPrefix("greetings: ")
    log.SetFlags(0)

    // A slice of names.
    names := []string{"Sonali", "Simran", "Sujata"}

    // Request greeting messages for the names.
    messages, err := greetings.Hellos(names)
    if err != nil {
        log.Fatal(err)
    }
    // If no error was returned, print the returned map of
    // messages to the console.
    fmt.Println(messages)
}
```
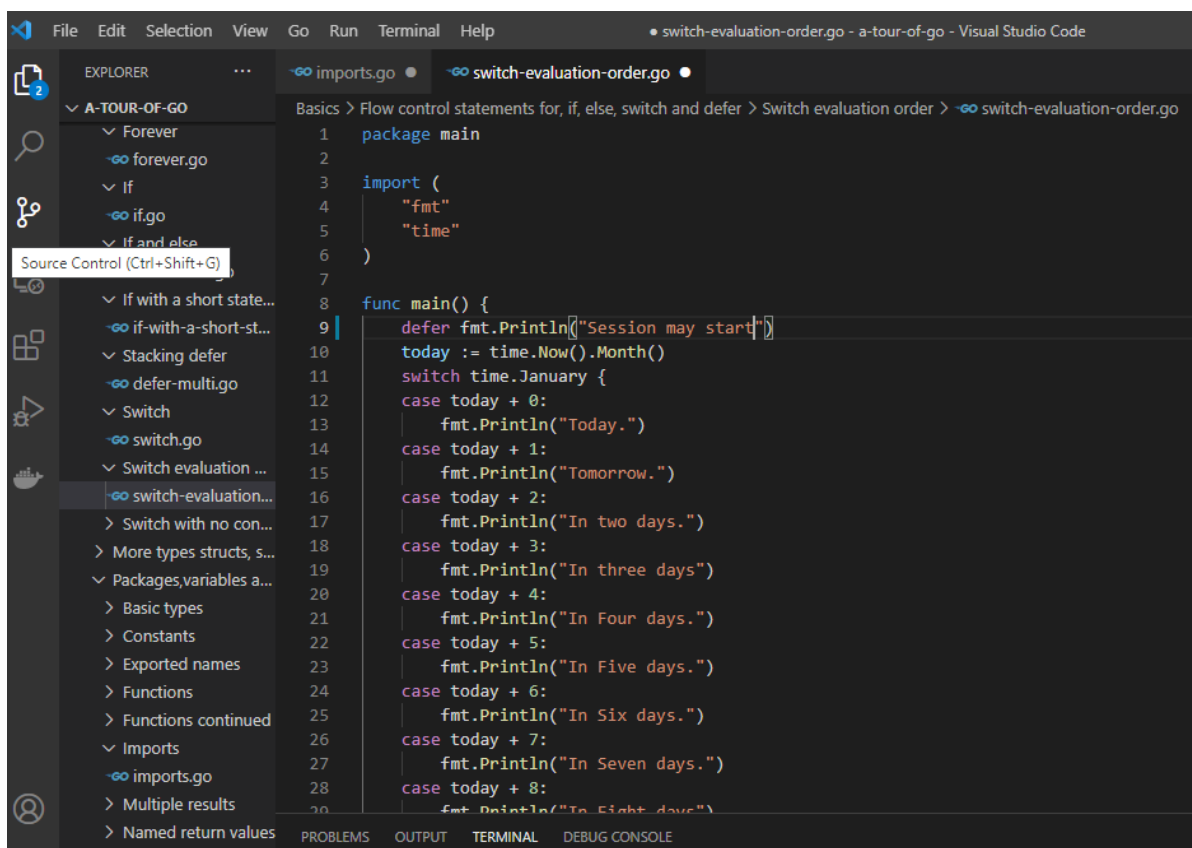
Week 5-6

Topic:

A tour of go

Description:

- Install go software.
- Hands on basics of Golang.
- Added all the programs of Golang to our GitHub account.
- Programs like:
    - o Functions
    - o Methods
    - o Pointers
    - o Structs
    - o Slices
    - o Maps
    - o Packages

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Week 7-8

Topic:

- Installation of Docker, MongoDB and GitHub Desktop
- Tour to Redis

Description:

- Installation of Docker, MongoDB and GitHub Desktop
- Basic Study of Redis
    - Cluster
    - Hashes
    - Keys
    - Lists
    - Sets
    - Sorted Sets
    - Strings
    - Transactions

Reference:

- https://redis.io/commands
- https://redis.io/topics/ldb

```
> SET connections 10

OK

> INCR connections

(integer) 11

> DEL connections

(integer) 1

> INCR connections

(integer) 1

> DECR connections

(integer) 0

> DECRBY connections 10

(integer) -10

> NEXT
```

Week 9

Topic:

- Hands-on Kafka

Description:

- Installation of Kafka
- Worked on Basics of Kafka

Reference:

- https://kafka.apache.org/intro
- https://kafka.apache.org/quickstart

Self assessment

The internship has definitely improved my communication skills required to talk to team members, the curiosity and passion to solve problems have all contributed to my interest in this field. The internship helped me to enhance my knowledge on Software develop. I feel my earlier skill set and knowledge lacked the kind of practical expertise that is required to truly experience in work. Learning from how to resolve the error help me to understand my capabilities .