Vidyalankar Polytechnic

Vision

To achieve excellence in imparting technical education so as to meet the professional and societal needs.

Mission

- Developing technical skills by imparting knowledge and providing hands on experience.
- Creating an environment that nurtures ethics, leadership and team building.
- Providing industrial exposure for minimizing the gap between academics & industry.

Program

Vision

To empower students with domain knowledge of Computer Engineering and interpersonal skills to cater to the industrial and societal needs.

Mission

- Developing technical skills by explaining the rationale behind learning.
- Developing interpersonal skills to serve the society in the best possible manner.
- Creating awareness about the everchanging professional practices to build industrial adaptability.

Diploma Programme in Computer Engineering

I – Scheme

Programme Structure

Programme Educational Objectives (PEO) (*What s/he will continue to do even after 3-5 years of working in the industry)*

PEO 1. Provide socially responsible, environment friendly solutions to Computer engineering related broad-based problems adapting professional ethics.

PEO 2. Adapt state-of-the-art Computer engineering broad-based technologies to work in multidisciplinary work environments.

PEO 3. Solve broad-based problems individually and as a team member communicating effectively in the world of work.

Program Outcomes (PO) given by NBA. (*What s/he will be able to do at the entry point of industry soon after diploma programme)*

PO 1. Basic knowledge: Apply knowledge of basic mathematics, sciences and basic engineering to solve the broad-based Computer engineering problem.

PO 2. Discipline knowledge: Apply Computer engineering discipline - specific knowledge to solve core computer engineering related problems.

PO 3. Experiments and practice: Plan to perform experiments and practices to use the results to solve broad-based Computer engineering problems.

PO 4. Engineering tools: Apply relevant Computer technologies and tools with an understanding of the limitations.

PO 5. The engineer and society: Assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to practice in field of Computer engineering.

PO 6. Environment and sustainability: Apply Computer engineering solutions also for sustainable development practices in societal and environmental contexts and demonstrate the knowledge and need for sustainable development.

PO 7. Ethics: Apply ethical principles for commitment to professional ethics, responsibilities and norms of the practice also in the field of Computer engineering.

PO 8. Individual and team work: Function effectively as a leader and team member in diverse/ multidisciplinary teams.

PO 9. Communication: Communicate effectively in oral and written form.

PO 10. Life-long learning: Engage in independent and life-long learning activities in the context of technological changes in the Computer engineering field and allied industry.

Program Specific Outcomes (PSO) (*What s/he will be able to do in the Computer engineering specific industry soon after diploma programme*)

PSO 1. **Computer Software and Hardware Usage**: Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO 2. Computer Engineering Maintenance: Maintain computer engineering related software and hardware systems.

SUMMER INTERNSHIP REPORT

AT

Sun Pharmaceutical Industries Ltd.

Submitted in partial fulfillment of the requirement for
the award of Diploma in Computer Engineering

MAY 2019 - JUNE 2019

SUBMITTED BY

Shrishti Singh
17203A0004

SUBMITTED TO
Department of Computer Engineering

VIDYALANKAR POLYTECHNIC
WADALA - (E), MUMBAI – 400 037

Roll No. and Name of Student: Shrishti Singh

Starting Date: 13 May 2019

Completion Date: 25 June 2019

Total Working Days: 35

Name of The Industry: Sun Pharmaceutical Industries Ltd

Address of The Industry With Pincode: Plot No.-89, 15th Road, MIDC, Andheri (E), Mumbai-400093

Department: IT (Development)

Maharashtra State Board of Technical Education, Mumbai

Certificate

This is to certify that Ms. **Shrishti Singh** with Enrollment No. **17203A0004** has successfully completed Industrial Training (22049) in **Sun Pharmaceutical Industries Ltd.** from 15th May 2019 to 25th June 2019 for partial fulfillment towards completion of Diploma in **Computer Engineering** from Vidyalankar Polytechnic (0568).

External Examiner   Faculty Mentor

Head of Department   Principal

SUN
PHARMA

SPIL/COR /19
June 27, 2019

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Shrishti Singh from Vidyalankar Polytechnic Mumbai has undergone the Summer Internship in **Sun Pharmaceutical Industries Ltd** in **Information Technology Department** and has completed the project report on To remove underlines and put hashes with bold and underline, 2. To develop a program in VB.NET which reads the selected file and displays the characters containing the Hashes in a grid with their serial number, under the guidance of Satish Revankar **from May 13 2019 to June 25 2019.**

The internship was completed to the satisfaction of the company guide and the organization.

We wish you success in all future endeavors.

Yours sincerely,

For **SUN PHARMACEUTICAL INDUSTRIES LTD.**

AUTHORISED SIGNATORY

Abstract

I carried out my internship at Sun Pharmaceutical Industries in the Information Technology department.

Under the application development team, the field supervisor overviewed the basic information of developing user interface in vb.net technology.

Developing user interface in .net framework enables the end user to communicate with the application easily and efficiently.

The .Net framework is a software development platform developed by Microsoft. The first version of the .net framework was released in the year 2002. Web services can also be developed using the .net framework.

ACKNOWLEDGEMENT

It is my pleasure to be indebted to various people, who directly or indirectly contributed in the development of this work and who influenced my thinking, behavior, and acts during the course of study.

I express my sincere gratitude to Mr Satish Revankar, & his team for providing me an opportunity to undergo summer training
I am thankful to Mr. Ashish Ukidve, Principal Vidyalankar Polytechnic and Mr. Vijay Patil HOD Computer Engineering department for all the support rendered to me during the entire internship.

I also extend my sincere appreciation to Ms. Sheetal Shelar, Faculty mentor who consistently provided me all the required valuable suggestions with his precious time in accomplishing my training.

Lastly, I would like to thank the almighty God and my parents for their moral support and my friends with whom I shared my day-to-day experience and received lots of suggestions that improved my quality of work.

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CHAPTER 1

Introduction to Sun Pharmaceutical Industries Ltd

The Sun Pharma is a pharmaceutical industry with high quality generic medicines at low prices. It is an Indian multinational company which was founded by Mr. Dilip Sanghvi in 1983 in Vapi, Gujarat with five products to treat psychiatry ailments.

Cardiology products were introduced in 1987 followed by gastroenterology products in 1989.

At present the company offers formulations in various therapeutic areas such as cardiology, psychiatry, neurology, gastroenterology and diabetology. It also provides APIs such as warfarin, carbamazepine, etodolac as well as anti-cancers, steroids, peptides, sex hormones and controlled substances.

The Sun Pharma Indian Multinational company is headquartered in Mumbai, Maharashtra.

The acquisition of Ranbaxy has made the company the largest pharma company in India ,the largest Indian pharma company in US, and the 5th largest speciality generic company globally.

Sun Pharmaceutical Industries has its branches worldwide and accommodates 52,700 employees as per 2018 census. The operating income is Rs.11,521 crore, net income is Rs.8700 crore and total assets is Rs.229,572 crore.

CHAPTER 2

Introduction to .net framework

.Net framework is a software framework technology developed by Microsoft that runs primarily on Microsoft Windows. The framework was meant to create applications, which would run on windows platform. The first version of .net framework was released in the year 2002.

The version was called .net framework 1.0. The .Net framework has come a lom=ng way since then and the current version is 4.7.1.

The .net framework can be used to create both- form based and web based applications. Web services can also be developed using the .net framework.

The framework also supports various programming languages such as Visual basic and C#. So the developers can choose and select the language to develop the required application.

1. **.Net Framework Architecture**

   1. Language: WinForms, ASP.net, ADO.net

   2. Library: Framework Class Library

   3. CLR: Common Language Runtime

2. **.Net Components**

   1. Common Language Infrastructure(CLI)

      Features: Exception handling, garbage collection

   2. Working with various programming languages

   a. Language: The first level is the programming language itself. The most common ones are VB.net and C#.

b. Compiler: There is a compiler which will be separate for each programming language.

c. Common Language Interpreter: This is the final level in .net which is used to run the .net program.

3. Class Library

   A class library is a collection of methods and functions that can be used for the core purpose.

3. .Net framework design principles

1. Interoperability: The .net framework provides a lot of backward support. If we have designed an application on the older version and try to use it in the new version, the application would still work. This is because with every release , Microsoft ensures that older versions get well with latest version.

2. Portability: Applications built on .net framework can be made to work on any windows platform.

3. Security: The inbuilt security mechanism helps in both validation and verification of applications. Every application can explicitly define their security mechanism.

4. Memory management: The CLR does all the work for memory management. The .net framework has all the capability to see those resources which are not used by the running program. It would then release those resources accordingly. This is done via Garbage Collector which runs on regular intervals and checks for the resources which are not used.

5. Simplified deployment: The .net also has tools which can be used to package applications built on .net framework. These packages can be distributed to the client machines. The packages would then automatically install the application.

CHAPTER 3

Introduction to VB

Visual Basic (VB) is a third generation event-driven programming language first released by Microsoft in 1991. It evolved from earlier DOS version called BASIC. Since then many versions of VB have been released from VB 1.0 to VB 6.0 which is the current version. Visual Basic is a user friendly language which enables to develop GUI window applications easily.

In 2002 , Microsoft released Visual Basic.Net (vb.net) to replace VB 6. However , many developers still favor VB 6 over VB.Net.

We can create mathematical programs, business applications, simulation programs and slot, machine, reverse, tic tac toe for gamers.

CHAPTER 4

4.0 Routine Maintenance

Our team has been on Visual Studio long enough that now we are running into issues with performance of the system. Many of such issues have been resolved by:

1. Upgrading the version of the software.
2. Cleaning out the redundant and unused data.

Other routine maintenance operations that should be followed are:

1. Servicing of machines should be done atleast once in a year.
2. Care should be taken that no unwanted data is stored in the machine.
3. While doing these operations, we should take care that no important data is lost.

4.1 Manufacturing Process

1. The programmer first reads the requirements given by the client and then does R&D about the project if required.

2. Then the programmer develops the software . this takes around three to four weeks time.

3. After the software is developed , the tester tests it by various testing methods according to the user requirements.

4. If there are some errors or defects in the software ,the developer corrects it and again the testing process is repeated.

5. If there are no corrections in the developed software, then the software is approved and deployment is done.

4.2 Planning

Software project planning is task, which is performed before the production of software actually starts. It is there for the software production but involves no concrete activity that has

any direction connection with software production; rather it is a set of multiple processes, which facilitates software production. Project planning may include the following:

Scope Management

It defines the scope of project; this includes all the activities, process need to be done in order to make a deliverable software product. Scope management is essential because it creates boundaries of the project by clearly defining what would be done in the project and what would not be done. This makes project to contain limited and quantifiable tasks, which can easily be documented and in turn avoids cost and time overrun.

During Project Scope management, it is necessary to -

- Define the scope
- Decide its verification and control
- Divide the project into various smaller parts for ease of management.
- Verify the scope
- Control the scope by incorporating changes to the scope

Project Estimation

For an effective management accurate estimation of various measures is a must. With correct estimation managers can manage and control the project more efficiently and effectively.

Project estimation may involve the following:

- **Software size estimation**

  Software size may be estimated either in terms of KLOC (Kilo Line of Code) or by calculating number of function points in the software. Lines of code depend upon coding practices and Function points vary according to the user or software requirement.

- **Effort estimation**

  The managers estimate efforts in terms of personnel requirement and man-hour required to produce the software. For effort estimation software size should be known.

This can either be derived by managers' experience, organization's historical data or software size can be converted into efforts by using some standard formulae.

- **Time estimation**

Once size and efforts are estimated, the time required to produce the software can be estimated. Efforts required is segregated into sub categories as per the requirement specifications and interdependency of various components of software. Software tasks are divided into smaller tasks, activities or events by Work Breakthrough Structure (WBS). The tasks are scheduled on day-to-day basis or in calendar months.

The sum of time required to complete all tasks in hours or days is the total time invested to complete the project.

- **Cost estimation**

This might be considered as the most difficult of all because it depends on more elements than any of the previous ones. For estimating project cost, it is required to consider -

  - Size of software
  - Software quality
  - Hardware
  - Additional software or tools, licenses etc.
  - Skilled personnel with task-specific skills
  - Travel involved
  - Communication
  - Training and support

CHAPTER 5

5.0   Software Testing

Testing is the process of validating that a piece of software meets its business and technical requirements. Testing is the primary avenue to check that the built product meets requirements adequately.

Test Strategy and Test Plan

Every project needs a Test Strategy and a Test Plan. These artefacts describe the scope for testing for a project:

- The systems that need to be tested, and any specific configurations
- Features and functions that are the focus of the project
- Non-functional requirements
- Test approach—traditional, exploratory, automation, etc.—or a mix
- Key processes to follow – for defects resolution, defects triage
- Tools—for logging defects, for test case scripting, for traceability
- Documentation to refer, and to produce as output
- Test environment requirements and setup
- Risks, dependencies and contingencies
- Test Schedule
- Approval workflows
- Entry/Exit criteria

Test Design

Now that you have a strategy and a plan, the next step is to dive into creating a test suite. A test suite is a collection of test cases that are necessary to validate the system being built, against its original requirements.

Test design as a process is an amalgamation of the Test Manager's experience of similar projects over the years, testers' knowledge of the system/functionality being tested and prevailing practices in testing at any given point. For instance, if you work for a company in the early stages of a new product development, your focus will be

on uncovering major bugs with the alpha/beta versions of your software, and less on making the software completely bug-proof.

5.1Quality Assurance

Quality assurance (QA) is a way of preventing mistakes and defects in manufactured products and avoiding problems when delivering products or services to customers; which ISO 9000 defines as part of quality management focused on providing confidence that quality requirements will be fulfilled. This defect prevention in quality assurance differs subtly from defect detection and rejection in quality control and has been referred to as a shift left since it focuses on quality earlier in the process.

After a software is developed , the quality assurance team checks for the defects or errors in the software using different procedures. The developer then corrects the defects and again quality assurance is done. If the software is developed according to the user requirements , then it is further sent for deployment.

CHAPTER 6

Troubleshooting Procedures

Software troubleshooting is the process of scanning, identifying, diagnosing and resolving problems, errors and bugs in software.

It is a systematic process that aims to filter out and resolve problems, and restore the software to normal operation. It is a subcategory of IT troubleshooting.

Software troubleshooting is generally done to resolve technical or source-code-related problems in software. This can be both functional and non-functional in nature. The software troubleshooting process starts with identifying the problem, checking on possible issues that can cause such problems and then working on measures and alternatives to find a solution.

Typically, issues are resolved by a software developer or tester that reviews and optimizes software, removing bugs and errors from the source code. Software vendors also help in software troubleshooting by publishing periodic updates/patches for software, which can help in ensuring smooth software operation. Software troubleshooting can also be done when software needs to be configured correctly, such as resolving issues due to incorrect installation or restoring software after corruption or file deletion caused by a virus.

1. Free up RAM by closing other open programs.

2. Restart the software.

3. Shut down and restart your computer.

4. Undo any recent hardware or software changes.

5. Uninstall the software, then reinstall it.

6. Look for software patches.

7. Scan for viruses and malware.

8.Check for a firewall conflict.

9. Boot up in Safe Mode.

10. Defragment your hard drive.

CHAPTER 7

Introduction about the project

1. In our company all the specifications of the medicines are written within two hashes(#) and then this data is uploaded on the software for the factory persons to refer the data while preparing the medicines.
2. So initially my work was to put the specifications of the medicines within two hashes(#) manually.
3. After this work was done , I was asked to develop such a program in vb.net which reads the data and puts values between the hashes(#) and displays it in a grid with their serial number.
4. The first thing I did after this is : I did an R&D about the functions and methods of vb.net.
5. Then I searched for a code that reads a file automatically and implemented it.
6. After that ,I used rowIndex method to generate sequence number.
7. After I was successful in reading a file and generate sequence number via coding, I used split() function to split the hash(#) symbol and join() function to join the hash(#) symbol to the string inside it.
8. After doing all these efforts and encountering end number of errors, the required output was obtained

Safety Procedures

1. Demonstrate Company's Commitment to Workplace Safety.
2. Assess Workplace Risks and Hazards.
3. While doing R&D about the project on internet, special care was taken that no such link or website is opened that contains any unusable content or.
4. While developing the code ,care was taken that no other application or program is affected while our code is running.
5. No other files or any data should be deleted or affected by our code.

CHAPTER 8

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