**MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION**

**VIDYAVARDHINI’S BHAUSAHEB VARTAK POLYTECHNIC, VASAI ROAD WEST**

**MICRO PROJECT**

**Academic year: 2021-22**

**Title of Micro Project:**

\*4-Bit SISO Shift Register\*

**Program/Code:** Computer Engineering (CO) **Semester:** THIRD

**Course/Code: Digital Techniques (22320)**

**Name: Siyan Pereira-Rishi Kashiya Roll No: 1122-1124**

**Enrolment No.: 2000930022-2000930024**

**Name of Faculty:** Mr. Nagnath Kavhale



# MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

**Certificate**

This is to certify that Mr. / Ms. **Siyan Pereira – Rishi Kashiya**

Roll No 1122-1124 of **THIRD Semester** of Diploma in of Computer Engineering

Institute, B.V. POLYTECHNIC (Code: **0093**) has completed the **Micro Project** satisfactorily in **Subject – Digital Techniques (22320)** for the academic year 2021- 2022 as prescribed in the curriculum.

### Place: Vasai Enrolment No: 2000930022-2000930024

**Date: ……………………… Exam. Seat No: …………………………………….**

**Subject Teacher Head of the Department Principal**



**Seal of Institution**

**Annexure - I**

**Part A: Micro Project Proposal**

* 1. **Aim/Benefits of the Micro-Project:** **4-Bit SISO Shift Register**

### The aim is to communicate effectively and skillfully at work place

### Course Outcomes integrated:

• Basic knowledge: Apply knowledge of basic mathematics, sciences and basic engineering to solve the broad-based Computer related problems.

• Discipline knowledge: Apply Computer Programming knowledge to solve broad-based Computer Engineering related problems.

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

• Engineering tools: Apply relevant Computer programming technologies and tools with an understanding of the limitations. Communication: Communicate effectively in oral and written form.

### Proposed Methodology:

### Follow safety measures.

### Follow ethical practices.

### 4.0 Action Plan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Details of the activity** | **Planned**  **Start date** | **Planned**  **Finish date** | **Name of**  **Members** |
| 1 | Formation of Group & Topic Selection |  |  | All members |
| 2 | Submission of Proposed Plan |  |  | All members |
| 3 | Preparation of Report |  |  | All members |
| 4 | Final valuation of a working Report |  |  | All members |
| 5 | Presentation of Report |  |  | All members |
| 6 | Submission of Final Report |  |  | All members |

**5.0 Resource Required:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Name of resources/Material** | **Specifications** | **Qty** | **Remarks** |
| 1. | Computer | Processor: i3 RAM: 4.00 GB | **1** |  |
| 2. | Microsoft Word | Word -2016 |  |  |
| 3. | Printer | Hp Laser Jet | **1** |  |
| 4. | Book/ website name |  |  |  |

**6.0 Name of Team Members with Roll No:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Roll No** | **Name of Students** | **Process and Product assessment (06)** | **Individual Presentation**  **(04)** | **Total**  **(10)** |
| 01 | 1122 | Siyan Pereira |  |  |  |
| 02 | 1123 | Krishita Pawar |  |  |  |
| 03 | 1124 | Rishi Kashiya |  |  |  |
| 04 |  |  |  |  |  |
| 05 |  |  |  |  |  |
| 06 |  |  |  |  |  |
| 07 |  |  |  |  |  |
| 08 |  |  |  |  |  |
| 09 |  |  |  |  |  |
| 10 |  |  |  |  |  |

**Name & Signature of Faculty: Mr. Nagnath kavhale**

**Title: 4-Bit SISO Shift Register**

**Final Micro Project Report**Annexure- II

### Rationale: The aim is to communicate effectively and skillfully at work place

**2. 0 Course Outcomes Integrated**:

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented

COs associated with the above-mentioned competency:

a. Use number system and codes for interpreting working of digital system.

e. Test data converters and PLDs in digital electronics systems.

b. Use Boolean expressions to realize logic circuits.

c. Build simple combinational circuits.

d. Build simple sequential circuits.

**3.0** **Actual Procedure Followed.**

**Digital logic circuits using digital ICS.**

**i. Identify pin configuration for IC**

**ii. Make relevant connections as per circuit diagram.**

**iii. Handle components / ICs.**

**4.0:** **Actual Resources Required:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Name of resources/Material** | **Specifications** | **Qty** | **Remarks** |
| 1. | Computer | Processor: i3 RAM: 4.00 GB | 1 |  |
| 2. | Microsoft Word | Word -2016 |  |  |
| 3. | Printer | Hp Laser Jet | 1 |  |
| 4. | Book/Site name |  |  |  |

**7.0 Skill Developed/Learning outcomes of this Micro-Project**

The following skills were developed:

1. **Teamwork:** Learned to work in a team and boost individual confidence.
2. **Problem-Solving:** Developed good problem-solving habits.
3. **Technical Writing:** Preparing the report of proposed plan and the final report.

## Rubrics for Assessment of Micro-Project

### Annexure - III

**Title:** **4-Bit SISO Shift Register**

**Institute Code:** 0093/1738 **Academic year:** 2021-22

**Program: CO-1** **Course & Code: DTE (22320)**

### Name of Candidate: Group-8 Roll No: 1122-1124

**Semester:** Third **Name of Faculty: Mr. Nagnath Kavhale**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Characteristic to be Assessed** | **Poor**  (Marks 1-3) | **Average**  (Marks 4-5) | **Good**  (Marks 6-8) | **Excellent**  (Marks 9-10) |
| 1. | Relevance to the Course |  |  |  |  |
| 2. | Literature Survey/Information Collection |  |  |  |  |
| 3. | Project Proposal |  |  |  |  |
| 4. | Completion of the Target as per Project Proposal |  |  |  |  |
| 5. | Analysis of Data and Representation |  |  |  |  |
| 6. | Quality of Prototype/Model |  |  |  |  |
| 7. | Report Preparation |  |  |  |  |
| 8. | Presentation |  |  |  |  |
| 9. | Viva |  |  |  |  |

### Annexure- IV

**Micro-Project Evaluation Sheet**

**Title:** 4-Bit SISO Shift Register

**Institute Code:** 0093 **Academic year:** 2021-22

**Program: CO-1** **Course & Code: DTE** (22320)

### Name of Candidate: Group-8 Roll No: 1122-1124

**Semester:** THIRD **Name of Faculty: Mr. Nagnath Kavhale**

**Course Outcomes Achieved:**

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry-oriented COs associated with the above-mentioned competency:

a. Perform basic operations on arrays.

b. Apply different searching and sorting techniques.

c. Implement basic operations on stack and queue using array representation.

d. Implement basic operations on Linked List.

e. Implement program to create and traverse tree to solve problems.

### Evaluation as per Suggested Rubric for Assessment of Micro Project:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Characteristic to be assessed** | **Poor Marks 1-3** | **Average Marks 4-5** | **Good Marks 6-8** | **Excellent Marks 9-10** | **Sub Total** |
| **(A) Process and product assessment Out Of 6** | | | | | | | |
| 1 | Relevance to the course |  |  |  |  |  |
| 2 | Literature Survey Information Collection |  | . |  |  |
| 3 | Completion of the Target as per project proposal |  |  |  |  |
| 4 | Analysis of Data and representation |  |  |  |  |
| 5 | Quality of Prototype/Model/Conte nt |  |  |  |  |
| 6 | Report Preparation |  |  |  |  |
| **(B) Individual Presentation/Viva Out of 4** | | | | | | | |
| 7 | Presentation | . |  |  |  |  |
| 8 | Viva |  |  |  |  |
| **Name and designation of the Faculty Member: Mr. Nagnath Kavhale** | | | | | | | |

**Weekly Activity Sheet**

**Topic:** 4-Bit SISO Shift Register

**Institute Code:** 0093 **Academic year:** 2021-22

**Program: CO-1** **Course & Code: DTE** (22320)

**Name of Candidate**: Group-8 **Roll No:** 1122-112

**Semester:** THIRD **Name of Faculty: Mr. Nagnath Kavhale**

|  |  |  |
| --- | --- | --- |
| **SR. NO** | **WEEK** | **ACTIVITY PERFORMED** |
| 1. | 1st Week | Discussion and Finalization of Topic |
| 2. | 2nd Week | Literature Review |
| 3. | 3rd Week | Submission of Proposed Plan |
| 4 | 4th Week | Information Collection |
| 5. | 5th Week | Analysis of Data |
| 6. | 6th Week | Compilation of content |
| 7. | 7th Week | Editing and Revising the Content |
| 8. | 8th Week | Report Preparation |
| 9. | 9th Week | Report Preparation |
| 10. | 10th- 12th Week | Presentation |

### Signature of Student Dated Signature of Faculty