**Summer Term Report (First 2 Weeks)**

Reported by : B Gopal (BU21EECE0100377)

Email: gboya@gitam.in

Day 1:

Commencement of the internship program with an outline of the activities planned for the initial fortnight, including market analysis, diverse requirements and design approaches, VARK learning styles, SWOT analysis, and an overview of embedded system block diagrams.

Day 2:

The inaugural session focused on crafting compelling resumes and bolstering LinkedIn profiles to enhance internship and job prospects. The subsequent session delved into Agile methodology, featuring interactive exercises to elucidate its principles. The Prex Studio facilitated this insightful workshop, also introducing valuable online resources for skill enhancement.

Day 3:

Day three commenced with an exploration of the Product Development Life Cycle (PDLC), offering insights into project initiation and implementation strategies. A practical session involved a small-scale calculator project aligned with PDLC principles. Subsequently, Git and GitHub basics were covered, detailing workspace management, commits, cloning, and related concepts. The latter part introduced tools and websites to streamline tasks.

Day 4:

The day featured a workshop on PCB designing and printing, introducing EasyEDA and TinkerCad software for circuit simulation and design. Participants grasped the significance of PCB design, its future prospects, and associated advantages and disadvantages.

Day 5:

The first session involved implementing previously designed circuits, covering both hardware and software aspects. Additionally, participants designed new analog and digital circuits, achieving tangible results. The second session delved into bit-wise operators, addressing techniques for setting individual bits in integers.

Day 6:

Day six focused on understanding IPv4 addresses, binary conversions, and related concepts. Topics covered included unsigned integers, little and big endian formats, 32-bit integer types, Linux environment, and introductory Arduino-level coding and bare metal coding.

Day 7:

Participants engaged in assignment statements and bit-wise operations, encountering challenges such as bit manipulation and exploring syntaxes like strtok and sprint.

Day 8:

The day featured hands-on experience with bare metal coding using Arduino in TinkerCad. Activities included digital and analog input and output operations, such as blinking LEDs, push-button interactions, and potentiometer control. The second session elucidated programming principles, debugging techniques, and build phases.