STUDENT NAME	**R.ROJA**	
STUDENT REGISTRATION NUMBER	**251U1R2064**	**CLASS: CSE(AIML)**
PROGRAM	**UG**	**YEAR and TERM: 1st year & 1st term**
SUBJECT NAME	**maths**	
NAME OF THE ASSESSMENT	**Reflective journal-7**	
DATE OF SUBMISSION	14.11.25	

Journal Entry Guidelines	**Description**
1.Experience (Class Reflection)	On the first day of sequences and series, the teacher asked us to look for patterns in numbers around us, like steps or daily expenses. We learned that a **sequence** is an ordered list of numbers, such as 2, 4, 6, 8…, and discovered how to write a **general term**. Then we explored **series**, which is the sum of sequence terms, like 2 + 4 + 6 + 8…, and saw simple formulas to calculate them quickly. The class included fun activities predicting the next terms in mysterious sequences and summing a few of them. By the end, we understood the connection between sequences and series and felt excited to explore infinite sums next.
2.Feelings (Emotional Reactions)	On the first day of sequences and series, I felt **curious and excited** when the teacher asked us to find patterns in numbers from daily life. Seeing the sequence 2, 4, 6, 8… and learning the general term made me feel **amazed** at how predictable numbers could be. When we explored series and summed terms like 2 + 4 + 6 + 8…, I felt a mix of **wonder and nervousness**, trying to follow the formulas. The group activity predicting the next terms in mysterious sequences was **fun and surprising**, especially when our guesses matched the pattern. By the end of the class, I felt **inspired and motivated** to learn more about the magic of sequences and infinite series.
3. Learning (Key Insights)	**Sequences are ordered lists** of numbers, where each number is called a term, and patterns can often be expressed with a general formula. **Series are sums of sequences**, connecting individual terms to a cumulative total frequency. **Arithmetic sequences** have a constant difference between terms; **geometric sequences** have a constant ratio. **Formulas simplify calculations**: for example, the sum of the first n terms of an arithmetic series is $S_n = \frac{n}{2}(a_1 + a_n)$.

	Recognizing patterns in sequences builds **intuition for problem-solving**, helping with predicting terms and computing sums efficiently. Sequences and series are **everywhere in real life**—from savings growth to population trends—making the topic highly practical and engaging.
4.Application (Practical Use)	**Finance & Savings** – Calculating interest in bank accounts or loans often uses arithmetic or geometric series to find total amounts over time. **Population & Growth Models** – Predicting population growth, bacteria multiplication, or viral spread often relies on geometric sequences. **Computer Science** – Algorithms, loops, and data structures use sequences to organize and process information efficiently. **Physics & Engineering** – Modeling motion, waves, and electrical circuits often involves sequences and series to approximate results. **Everyday Life** – Planning staircases, distributing resources, or even summing your weekly expenses can involve simple arithmetic series.
5.Conclusion	Sequences and series help us **understand patterns and relationships in numbers**, making it easier to predict and calculate sums efficiently. They are **found everywhere in real life**, from finance and population growth to computer algorithms and physics. Learning them builds **logical thinking and problem-solving skills**, and mastering formulas allows us to handle both finite and infinite sums with ease. Overall, sequences and series provide a **powerful tool to model and analyze patterns** in everyday life and advanced mathematics.