

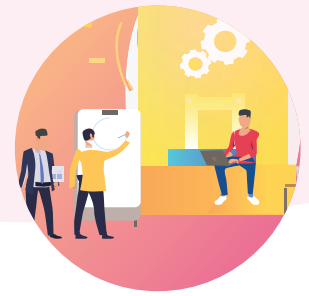


## INTRODUCTION TO PYTHON PROGRAMMING

During these classes the students learn the basic concepts of Python programming language. They will write programs using text based editor. All programs are written using the Python Turtle library.

SESSION	CONCEPT	SKILLS
01	Drawing Lines - I	<b>Numeracy</b> Write code in Python to create drawings at specific coordinates.
02	Drawing Lines - II	<b>Sequencing</b> Write code in Python to create lines, angles and hollow basic 2D shapes.
03	Drawing Shapes - I	<b>Decomposition</b> Write code in Python to create color filled advance 2D shapes.
04	Drawing Shapes - II	<b>Decomposition</b> Write code in Python to create color filled advance 2D shapes.
05	Simple Animation	<b>Pattern Recognition, Application Of Learning</b> Practice activities that involve making of animations.
06	<b>Formative Assessment</b>	<b>Assessment Of Learning</b>
07	Why Do We Need Loops ?	<b>Pattern Recognition, Logic</b> Explore the need of loops in code. Use basic loops to create art.
08	Tinkering With Nested Loops - I	<b>Perseverance, Problem solving</b> Practice activities on loops , Introduction to nested loops.

# Learning Path For EARLY ACHIEVERS



09	Tinkering With Nested Loops - II	<b>Pattern Recognition, Decomposition, Abstraction</b> Write code using nested loops to create complex art patterns.
10	<b>Project Work - I</b>	<b>Pattern Recognition, Perseverance, Algorithms , Code</b> Draw interesting objects using learned concepts.
11	<b>Project Work - II</b>	<b>Pattern Recognition, Perseverance, Algorithms , Code</b> Draw interesting objects using learned concepts.
12	<b>Formative Assessment</b>	<b>Assessment Of Learning</b>
13	User Input	<b>Numeracy, Logic</b> Write code to create programs that behave according to the user inputs.
14	Events	<b>Logic, Abstraction</b> Write code to control the turtle using key events.
15	Conditionals	<b>Decision making, Logic</b> Write code using conditionals to give specific outputs.
16	Game Design Part 1 - I	<b>Logic, Creativity</b> Write code to create fun games.
17	Game Design Part 1 - II	<b>Logic, Creativity</b> Write code to create fun games.
18	Game Design Part 2 - I	<b>Logic, Creativity</b> Write code to create fun games.
19	Game Design Part 2 - II	<b>Logic, Creativity</b> Write code to create fun games.
20	<b>Formative Assessment</b>	<b>Assessment Of Learning</b>