The Camford International School

ANNUAL LESSON PLAN 2023-2024

GRADE : 11   **SUBJECT : INFORMATICS PRACTICES(065)**

MONTH	CHAPTER NO. AND NAME	DETAIL CONCEPTS TO BE COVERED	PRACTICALS	AIL/AIP
JUNE	Unit 1: Introduction to Computer System Unit 2: Introduction to Python	Introduction to computers and computing: evolution of computing devices, components of a computer system and their interconnections, Input/Output devices. Computer Memory: Units of memory, types of memory – primary and secondary, data deletion, its recovery and related security concerns. Software: purpose and types – system and application software, generic and specific purpose software. Basics of Python programming, Python interpreter - interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants	1. To find average and grade for given marks. 2. To find the sale price of an item with a given cost and discount (%). 3. To calculate perimeter/circumference and area of shapes such as triangle, rectangle, square and circle. 4. To calculate Simple and Compound interest. 5. To calculate profit-loss for a given Cost and Sell Price. 6. To calculate EMI for Amount, Period and Interest.	-

JULY	Unit 2: Introduction to Python	variables, types of operators, precedence of operators, data types, mutable and immutable data types, statements, expressions, evaluation of expressions, comments, input and output statements, data type conversion, debugging. Control statements: if-else, for loop.	7. To calculate tax - GST / Income Tax. 8. To find the largest and smallest numbers in a list. 9. To find the third largest/smallest number in a list. 10. To find the sum of squares of the first 100 natural numbers. 11. To print the first 'n' multiples of a given number. 12. To count the number of vowels in a user entered string. 13. To print the words starting with a particular alphabet in a user entered string.	-
AUGUST	Unit 2: Introduction to Python	List operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions.: len(), list(), append(), extend(), insert(), count(), find(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum() Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions: len(), dict(), keys(), values(), items(), get(), update(), clear(), del()	14. To print the number of occurrences of a given alphabet in a given string. 15. Create a dictionary to store names of states and their capitals. 16. Create a dictionary of students to store names and marks obtained in 5 subjects.	-

			17. To print the highest and lowest values in the dictionary.	
SEPTEMBER	Unit 3: Database concepts and the Structured Query Language	Database Concepts: Introduction to database concepts and its need, Database Management System. Relational data model: concept of attribute, domain, tuple, relation, candidate key, primary key, alternate key, foreign key. Structured Query Language: Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL: Creating a database, using database, showing tables using MySQL Data Types : char, varchar, int, float, date. Data Definition Commands: CREATE, DROP, ALTER (Add and Remove primary key, attribute).	Queries based on DDL	-
OCTOBER	Unit 3: Database concepts and the Structured Query Language Unit 4: Introduction to the Emerging Trends	Data Query Commands: SELECT-FROM-WHERE, LIKE, BETWEEN, IN, ORDER BY, using arithmetic, logical, relational operators and NULL values in queries, Distinct clause Data Manipulation Commands: INSERT, UPDATE, DELETE. Artificial Intelligence, Machine Learning, Natural Language Processing,	Queries based DML	

NOVEMBER	Unit 4: Introduction to the Emerging Trends	● Immersive experience (AR, VR), Robotics ● Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, ● Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); ● Grid Computing, Block chain technology		Presentation on Comparative analysis TECHNOLOGICAL INFRASTRUCTURE (Smart Cities) In J&K vs TamilNadu