Vidnyan Mahavidhyalaya Sangola
Department of Computer Science
Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2018-19**

Class	Subject	July	August
ECS-III	**Python**	**Introduction to Python:** Features/Characteristics of Python, Structure of a Python Program, Writing simple python program, , Python Virtual Machine, Identifiers and Keywords, Operators Operator Precedence and Associativity **Python Data Types:** Variables, Data types : Built-in Datatypes, Booldatatype, Sequences in python,Sets, Literals in python, User Defined Datatypes, Constants , Type conversion, Inputand Output Statements, Command line arguments	**Control Statements:** Conditional Statements: if, if-else, nested if –else,Looping: for, while, nested loops Loop manipulation using pass, continue, break, assert and else suite **Strings, Collection Lists, Tuples and Dictionaries:** Strings: Introduction to String, String Manipulation.Collection List: Introduction to List, Manipulating list.Tuples: Introduction to Tuples, Manipulating Tuples. Dictionaries: Concept of Dictionary, Techniques to create, update &delete dictionary items

Class	Subject	September	October
ECS-III	**Python**	**Functions, Modules ,Packages** Difference between a Function and a Method Functions: Defining a function, Calling a function, Advantages of functions, Types of functions, Global andLocal variablesModules: Importing	**Regular Expressions** Introduction to Regular Expression, Advantages & Operations, Sequence characters in Regular Expression, Powerful pattern matching and searching, Password, email, url validation using regular expression, Pattern finding programs using

		module, Creating & exploring modules, Mathmodule, Random module, Timemodule Understanding Packages, Programming using external packages **Object Oriented Programming:** Features, Concept of Class & Objects, Constructor, Types of Variables, Namespaces, Types of Methods, Inner Classes, Constructors in Inheritance, Overriding Super Class Constructors and Methods, Types of Inheritance, Abstract Classes and Interfaces, The Super( ) Method, OperatorOverloading, Method Overloading, Method Overriding	regular expression **Exception Handling** Errors in a Program, Exceptions, Exception handling, Types of Exceptions, User-definedExceptions **Python File Operation** Types of File, Opening and Closing a File,Reading and writing to files, Manipulating directories

Teacher Name & Signature **Head of Department**

Vidnyan Mahavidhyalaya Sangola
Department of Computer Science
Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2019-20**

Class	Subject	July	August
ECS-III	**Python**	**Introduction to Python:** Features/Characteristics of Python, Structure of a Python Program, Writing simple python program, , Python Virtual Machine, Identifiers and Keywords, Operators Operator Precedence and Associativity **Python Data Types:** Variables, Data types : Built-in Datatypes, Booldatatype, Sequences in python,Sets, Literals in python, User Defined Datatypes, Constants , Type conversion, Inputand Output Statements, Command line arguments	**Control Statements:** Conditional Statements: if, if-else, nested if –else,Looping: for, while, nested loops Loop manipulation using pass, continue, break, assert and else suite **Strings, Collection Lists, Tuples and Dictionaries:** Strings: Introduction to String, String Manipulation.Collection List: Introduction to List, Manipulating list.Tuples: Introduction to Tuples, Manipulating Tuples. Dictionaries: Concept of Dictionary, Techniques to create, update &delete dictionary items

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ECS-III	**Python**	**Functions, Modules ,Packages** Difference between a Function and a Method Functions: Defining a function, Calling a function, Advantages of functions, Types of functions, Global andLocal variablesModules: Importing	**Regular Expressions** Introduction to Regular Expression, Advantages & Operations, Sequence characters in Regular Expression, Powerful pattern matching and searching, Password, email, url validation using regular expression,

		module, Creating & exploring modules, Mathmodule, Random module, Timemodule Understanding Packages, Programming using external packages **Object Oriented Programming:** Features, Concept of Class & Objects, Constructor, Types of Variables, Namespaces, Types of Methods, Inner Classes, Constructors in Inheritance, Overriding Super Class Constructors and Methods, Types of Inheritance, Abstract Classes and Interfaces, The Super( ) Method, OperatorOverloading, Method Overloading, Method Overriding	Pattern finding programs using regular expression **Exception Handling** Errors in a Program, Exceptions, Exception handling, Types of Exceptions, User-definedExceptions **Python File Operation** Types of File, Opening and Closing a File,Reading and writing to files, Manipulating directories

Teacher Name & Signature **Head of Department**

Vidnyan Mahavidhyalaya Sangola
Department of Computer Science
Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2020-21**

Class	Subject	July	August
ECS-III	**Python**	**Introduction to Python:** Features/Characteristics of Python, Structure of a Python Program, Writing simple python program, , Python Virtual Machine, Identifiers and Keywords, Operators Operator Precedence and Associativity **Python Data Types:** Variables, Data types : Built-in Datatypes, Booldatatype, Sequences in python,Sets, Literals in python, User Defined Datatypes, Constants , Type conversion, Inputand Output Statements, Command line arguments	**Control Statements:** Conditional Statements: if, if-else, nested if –else,Looping: for, while, nested loops Loop manipulation using pass, continue, break, assert and else suite **Strings, Collection Lists, Tuples and Dictionaries:** Strings: Introduction to String, String Manipulation.Collection List: Introduction to List, Manipulating list.Tuples: Introduction to Tuples, Manipulating Tuples. Dictionaries: Concept of Dictionary, Techniques to create, update &delete dictionary items

Class	Subject	September	October
ECS-III	**Python**	**Functions, Modules ,Packages** Difference between a Function and a Method Functions: Defining a function, Calling a function, Advantages of functions, Types of functions, Global andLocal variablesModules: Importing	**Regular Expressions** Introduction to Regular Expression, Advantages & Operations, Sequence characters in Regular Expression, Powerful pattern matching and searching, Password, email, url validation using regular expression,

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Teacher Name & Signature **Head of Department**

Vidnyan Mahavidhyalaya Sangola

Department of Computer Science

Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2021-22**

Class	Subject	July	August
ECS-III	**Advance Python**	**Unit 1: Multithreading** Understanding threads, Difference between Process and a Thread, Creating Threads, Thread Synchronization, Deadlock of Threads, Avoiding Deadlock in a Program. **Unit 2: Networking in Python** Introduction to Sockets Programming, Server Socket Methods, Client Socket Methods, IP Address, URL, TCP/IP Server, TCP/IP Client, Sending E-mail Application.	**Unit 3: GUI Programming:** Introduction, Advantages of GUI, Introduction to GUI library, Root Window, Working with Containers: Frame, Canvas Layout Management, Events and Bindings, Font, Colors, drawing on Canvas (line, oval, rectangle, etc.) Widgets: Label, Button, Checkbutton, Entry, Listbox, Message, Radiobutton, Text, Spinbox, Scrollbar, Menu etc. Writing Python Programs for GUI applications. **Unit 4: Database Connectivity using MySQL** Installation of MySQL Database Software, Installing MySQL Connector, Steps for Database Connectivity, Working with MySQL Database: Inserting, Retrieving, Deleting and updating the data working with Stored Procedure.
ECS-I	**Python-I**	**Introduction:** features of python, steps for execution of python program, python virtual machine, memory management, garbage collection, Installation of python software, setting the path to operating system environment, writing the first python program, executing a python program.	**Datatypes in python**: Datatypes, type conversion- implicit and explicit, comments, literals, constants, Identifiers, naming conventions, operators, operator precedence and associativity, input and output statements, command-line arguments. **Control Statements:** if statement, if..else statement, if..elif..else statement, while loop, for loop, else suite, infinite loop, nested loops,

Class	Subject	September	October
ECS-III	**Advance Python**	**Unit 5: Introduction to CGI Programming and XML** Introduction to CGI, Architecture of CGI, Web Server Configuration, Http Header, CGI Environment Variables, GET and POST Methods, File Upload, Handling Cookies, Validation and Authentication, Accessing and Managing Users, Introduction to XML, XML Parser Architecture and API's, Parsing XML with SAX API's, Parsing XML with DOM API's.	**Unit 6: Python for Data** Use of pandas module, Install and import module, Creating Series and DataFrame, Updating Series and DataFrame, Exporting and importing data- Excel and MySQL, Introduction to plotting- use of matplotlib, Install and import matplotlib, statistical graphics using matplotlib- Univariate, Bivariate and Multivariate data, Pandas objects- Histograms, Density plot, Scatter plot, Hexbin plot, Boxplot
ECS-I	**Python-I**	word indentation, break statement, continue statement, pass statement, assert statement, return statement. **Arrays in Python:** Concept of array, advantages of array, creating an array, importing array module, indexing and slicing on arrays, methods of array module, types of arrays.	**String, List, Tuple, Set and Dictionary:** Creating string, manipulating different operations on string, creating list, manipulating different operations on list, list comprehensions, creating tuple, manipulating different operations on tuple, creating set, manipulating different operations on set, creating dictionary, manipulating different operations on dictionary

Teacher Name & Signature **Head of Department**

Vidnyan Mahavidhyalaya Sangola

Department of Computer Science

Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2021-22**

Class	Subject	December	January
ECS-I	Python-II	**Functions:** Difference between function and method, defining function, calling function, returning result from function, returning multiple values from function, functions are objects, formal and actual arguments, types of arguments, local, nonlocal and global variables, global keyword, recursive functions, anonymous functions or lambdas, using lambdas with filter(), map() and reduce() functions.	**Modules and packages:** what are modules in python, import statement, from…import statement, creating our own modules, importing modules, working with built-in modules- Math module, time module and random module. what are packages, creating and importing module from packages **Python Object Oriented:** Difference between procedure oriented and object oriented programming. Features of object oriented programming- classes and objects, inheritance, polymorphism, encapsulation, abstraction. Creating class, self-variable, constructor, types of variables, namespaces,

Class	Subject	Februey	March
ECS-I	Python-II	types of methods, passing member of one class to another class, inner classes. Types of inheritance, super() method, method overloading, method overriding, abstract classes and interfaces. **Exception Handling:** Error in python program, exceptions, steps in exception handling using try, except, else and finally blocks,	types of exceptions-built-in exceptions and user defined exceptions, assert statement. **File Input Output:** concept of files, Types of files in python, opening a file- the file opening modes, closing a file, working with text files containing strings, working with binary files, with statement, pickling and unpickling, seek() and tell() methods, random accessing of binary files, zipping and unzipping files, working with directories.

Teacher Name & Signature **Head of Department**

Dr.Ganpatrao Deshmukh Mahavidhyalaya Sangola

Department of Computer Science

Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2022-23**

Class	Subject	July	August
ECS-III	Advance Python	**Unit 1: Multithreading** Understanding threads, Difference between Process and a Thread, Creating Threads, Thread Synchronization, Deadlock of Threads, Avoiding Deadlock in a Program. **Unit 2: Networking in Python** Introduction to Sockets Programming, Server Socket Methods, Client Socket Methods, IP Address, URL, TCP/IP Server, TCP/IP Client, Sending E-mail Application.	**Unit 3: GUI Programming:** Introduction, Advantages of GUI, Introduction to GUI library, Root Window, Working with Containers: Frame, Canvas Layout Management, Events and Bindings, Font, Colors, drawing on Canvas (line, oval, rectangle, etc.) Widgets: Label, Button, Checkbutton, Entry, Listbox, Message, Radiobutton, Text, Spinbox, Scrollbar, Menu etc. Writing Python Programs for GUI applications. **Unit 4: Database Connectivity using MySQL** Installation of MySQL Database Software, Installing MySQL Connector, Steps for Database Connectivity, Working with MySQL Database: Inserting, Retrieving, Deleting and updating the data working with Stored Procedure.
ECS-I	Python-I	**Introduction:** features of python, steps for execution of python program, python virtual machine, memory management, garbage collection, Installation of python software, setting the path to operating system environment, writing the first python program, executing a python program.	**Datatypes in python**: Datatypes, type conversion- implicit and explicit, comments, literals, constants, Identifiers, naming conventions, operators, operator precedence and associativity, input and output statements, command-line arguments.

			Control Statements: if statement, if..else statement, if..elif..else statement, while loop, for loop, else suite, infinite loop, nested loops,

Class	Subject	September	October
ECS-III	**Advance Python**	**Unit 5: Introduction to CGI Programming and XML** Introduction to CGI, Architecture of CGI, Web Server Configuration, Http Header, CGI Environment Variables, GET and POST Methods, File Upload, Handling Cookies, Validation and Authentication, Accessing and Managing Users, Introduction to XML, XML Parser Architecture and API's, Parsing XML with SAX API's, Parsing XML with DOM API's.	**Unit 6: Python for Data** Use of pandas module, Install and import module, Creating Series and DataFrame, Updating Series and DataFrame, Exporting and importing data- Excel and MySQL, Introduction to plotting- use of matplotlib, Install and import matplotlib, statistical graphics using matplotlib- Univariate, Bivariate and Multivariate data, Pandas objects- Histograms, Density plot, Scatter plot, Hexbin plot, Boxplot
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Teacher Name & Signature **Head of Department**

Dr.Ganpatrao Deshmukh Mahavidhyalaya Sangola

Department of Computer Science

Teaching Plan

Teacher Name: Miss Dhure M.D **Academic Year :2022-23**

Class	Subject	December	January
ECS-I	Python-II	**Functions:** Difference between function and method, defining function, calling function, returning result from function, returning multiple values from function, functions are objects, formal and actual arguments, types of arguments, local, nonlocal and global variables, global keyword, recursive functions, anonymous functions or lambdas, using lambdas with filter(), map() and reduce() functions.	**Modules and packages:** what are modules in python, import statement, from…import statement, creating our own modules, importing modules, working with built-in modules- Math module, time module and random module. what are packages, creating and importing module from packages **Python Object Oriented:** Difference between procedure oriented and object oriented programming. Features of object oriented programming- classes and objects, inheritance, polymorphism, encapsulation, abstraction. Creating class, self-variable, constructor, types of variables, namespaces,

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