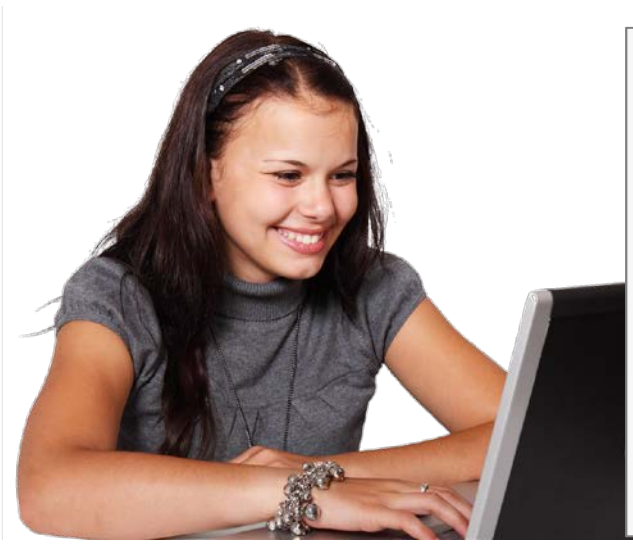
python™ Coding & Algorithms



```
    def rust(self):
        self.color = self.rusty_color

    def clean(self):
        self.color = self.clean_color

    def flip(self):
        heads_options = [True, False]
        choice = random.choice(heads_options)
        self.head = choice

# Dollar inherit from Coin class

class Dollar(Coin):

    # undefined value in the inherited class need to be defined in the constructor

    def __init__(self):
        data = {
            "original_value": 1.00,
            "clean_color": "gold",
            "rusty_color": "greenish",
            "num_edges": 1,
            "diameter": 22,
            "thickness": 3,
            "mass": 9.5
            }
        # pack the above data and
```

It's useful

Let's master Python!

Python is the most popular programming language with its high productivity and a wide variety of libraries, especially AI and computational sciences. Python is a high-level and easy to learn language and is a perfect start point to learn full functional computer language used in industries.

- **All fundamentals from basic syntax to Web application development**
- **Many mini-projects and exercises**
- **File access, database access, and many libraries in the latter half of the program**

Day
Time
Period
No class dates
Number of total classes
Fee

Let's get the edge with STEAM Dojo

After this program

Your child will be able to develop Python programs that use a function, object-oriented programming, recursion, file access, database access, and many libraries such as graph drawing with matplotlib and Web application with Flask.

Syllabus (Subject to change)

1) Week 1 –Week 15
   Fundamentals of Python and Algorithms
2) Week 16 – Week 30
   File access, SQL and Non-SQL DB access, Graphing with MatPlotLib, and Web application development with Flask

Prerequisite

No previous programming experience required.

Hardware & Software requirements

Please create a Google account. This program uses Google Collaboratory for the first half.
For the first half until the mid of December, your child needs PC, Mac, or relatively new Chromebook. Old Chromebook and tablet have a performance problem with the Zoom.
From January, your child needs a PC or Mac. Since your child needs to install databases, you need a PC or Mac. The Chromebook does not work. We recommend having an additional monitor or PC, Mac, Chromebook, or Tablet to see Zoom screen while fully using the main PC/Mac's screen for programming.