

## Session 01. Python Basics

Implement the following Python scripts:

- **Q1:** 1) Write a function that takes an integer value and converts it to a binary number, represented by a string
  - `int2binary(0)="0"`
  - `Int2binary(10)="1010"`

- **Q2:** Parsing an HTTP request. (use the **file exercise2.py** as template)
  - For this exercise, you will write a function that will parse an HTTP request from a client. Your function will look like

```
def parseMessage(input_message):
```

```
.....
```

```
    return requested_resource, client's_browser, HTTP version, language
```

- Test your function with the following input messages:

```
    input_message1:
```

```
GET /index.html HTTP/1.1\r\n
Host: www-net.cs.umass.edu\r\n
User-Agent: Firefox\r\n
Accept: text/html,application/xhtml+xml\r\n
Accept-Language: en-us\r\n
Accept-Charset: ISO-8859-1,utf-8;q=0.7\r\n
Keep-Alive: 115\r\n
Connection: keep-alive\r\n
```

Function output: (`"/index.html"`, `"Firefox"`, `" HTTP/1.1"`, `"en-us"`)

- **Q3:** As previously explained, strings in Python are “immutable” which means they cannot be changed after they are created
  - `String1[1]="X"` would cause an error
  - Write a function that allows you to change a particular character in a string
    - Examples:
      - `changeChar("This is a string",0,"X")="Xhis is a string"`
      - `changeChar("This is a string",5,"X")="This Xs a string"`
      - `changeChar("This is a string",10,"X")="This is a Xtring"`