Subject: Software Construction and Development Lab (CL-2001)

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Quiz : 1

Question 1: Refactor the following code to apply software construction principles such as modularity and clear naming conventions, while ensuring that the output remains the same. Also, show the output of the refactored code:

```python
def function():
    mylist = []
    for i in range(5):
        mylist.append(i)
    final = []
    for i in mylist:
        final.append(i * 2)
    return final

def main():
    a = function()
    print(a)

if __name__ == "__main__":
    main()
```

Question 2: What will be the outputs of the Python codes given below?

1. x = range(8)

    values = [3<<i if i%2 > 0 else i^(i*i) for i in x]

    for value in values:

        print(value)

2. def filterItems(x):

        values = [i**2 + (i // 2) if i % 3 == 0 else i ^ 3 for i in x]

         return [value for value in values if value % 5 == 0]

    filtered_values = filterItems(range(3, 15, 3))

    print(filtered_values)