1) Create a package graphics with modules rectangle, circle and sub-package 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module. Write programs that finds area and perimeter of figures by different importing statements. (Include selective import of modules and import * statements)

```
graphics/
|-- __init__.py
|-- rectangle.py
|-- circle.py
|-- 3D_graphics/
|   |-- __init__.py
|   |-- cuboid.py
|   |-- sphere.py
```

Creating a package in Python involves organizing your code into a directory structure and including __init__.py files to indicate that the directories should be treated as packages. Here's how you can create a package named "graphics":

Create a new directory named "graphics."

graphics/

Inside the "graphics" directory, create an __init__.py file. This file can be empty or may contain initialization code.

graphics/

|-- __init__.py

Inside the "graphics" directory, create your modules. For this example, let's create "rectangle.py" and "circle.py."

Add your code to the modules

rectangle.py

```
# rectangle.py

def area(length, width):
    return length * width


def perimeter(length, width):
    return 2 * (length + width)
```

circle.py

```
# circle.py

import math


def area(radius):
```

```
    return math.pi * radius**2


def perimeter(radius):
    return 2 * math.pi * radius
```

cuboid.py:

```
# cuboid.py
def surface_area(length, width, height):
    return 2 * (length * width + width * height + height * length)

def volume(length, width, height):
    return length * width * height
```

sphere.py:

```
# sphere.py
import math

def surface_area(radius):
    return 4 * math.pi * radius**2
```

```
def volume(radius):
    return (4 / 3) * math.pi * radius**3
```

Now, you have a basic structure for your "graphics" package.

To use this package, you can create another Python script outside the "graphics" directory and import the modules as needed.

main.py:

```
# main.py

from graphics.rectangle import area as rect_area

from graphics.circle import perimeter as circle_perimeter

from graphics.3D_graphics.cuboid import surface_area as cuboid_surface_area

from graphics.3D_graphics.sphere import volume as sphere_volume


# Using selective import

length = 5

width = 3

radius = 4
```

```
height = 6


print("Rectangle Area:", rect_area(length, width))
print("Circle Perimeter:", circle_perimeter(radius))
print("Cuboid Surface Area:", cuboid_surface_area(length, width, height))
print("Sphere Volume:", sphere_volume(radius))
```

When you run main.py, it will import the functions from the "graphics" package and use them.

```
python main.py
```