

Md. Raiyan Alam  
ID: 160041013  
CSE 4851(Design Pattern)  
Assignment 2

The main class I used is **Age of villagers.java**

All the simple shape based classes are implemented via **Shapes** class. All shapes I included are **Rectangle**, **Square**, **Circle**, **Cylinder** and **Triangle**.

Then from the Age of villager.java created functions for creating the house, tree and water source

House included-

```
• Shapes Roof = new Triangle();  
• Shapes Body = new Rectangle();  
• Shapes Windows = new Square();
```

Tree included-

```
• Shapes Trunk = new Cylinder();  
• Shapes Crown = new Circle();  
• Shapes Leaves = new Triangle();
```

Water Source include-

```
• Shapes Pipe = new Cylinder();  
• Shapes Top = new Circle();  
• Shapes Bottom = new Circle();
```

From those previously mentioned simple shapes the composite shape were created through calling functions for them