

Explanation of station3 class and the defined process parameters and the process logic

At the beginning the operator and the robot are available. Additionally there is one paper from station 2 available. The simulation runs for 1 shift (8 hours = 2880 seconds). The paper generator is a placeholder for the station 2. The cycle time is estimated a random string between 60 seconds and 100 seconds. The number of produced papers is counted. At the beginning the number of produced papers is equal to zero.

The Class **Station3** initializes the components and parameters for the simulation station.

- The **__init__** method initializes the attributes of the **Station3** class.
- **env**: Refers the SimPy environment.
- **paper_list**: The list contains the number of collected papers
- **robot**: An instance of the **robot** class representing the robot available at the station.
- **operator**: An instance of the **operator** class representing the operator available at the station.
- **jig1**: An instance of the **jig1** class representing the tool Jig1 available at the station.
- **jig2**: An instance of the **jig2** class representing the tool Jig2 available at the station.
- **paper**: An instance of the **paper** class representing the paper available at the station.
- **produced_papers**: The number of produced papers
- **total_production_time**: It counts the time of total production.

The initialization sets up the basic components required for the manufacturing process at Station 3. The booleans **quality1** and **quality2** are initially set to **False**, indicating that the quality checks for Jig1 and Jig2 are not done at the beginning of the simulation.

```
#Environment is:
# - Station 3

#6 Define a station3 class and define the process parameters and the process logic
class Station3(object):
    def __init__(self, env, paper_list):
        self.env = env
        self.paper_list = paper_list
        # There is one robot available:
        self.robot = robot(env, self)
        # There are operators available. Start with 1 operator:
        self.operator = operator(env, self, self.robot.quality_check_jig1, self.robot.quality_check_jig2)
        # There is one jig1 available:
        self.jig1 = jig1(env, self)
        # There is one jig2 available:
        self.jig2 = jig2(env, self)
        # There is one paper available:
        self.paper = paper(env, self)
        # count the number of produced papers
        self.produced_papers = 0
        # count the total production time
        self.total_production_time = 0
        # TODO: Change here if you want to create a fixed number of customers
        # at the beginning quality 1 and quality 2 are not done
        self.quality1 = False
        self.quality2 = False
```