```
{
    "name": "Discrete Poisson Variable With Lookup Library",
    "objectType": "sipModel",
    "libraryType": "SIPmath_3_0",
    "dateCreated": "2021-07-03",
    "version": "0",
    "provenance": "SLS 8-3-21",
    "U01": {
        "rng": [
            {
                "name": "HDR9",
                "function": "HDR_2_0",
                "arguments": {
                    "counter": "PM_Index",
                    "entity": 9039920,
                    "varId": 9,
                    "seed3": 0,
                    "seed4": 0
                }
            }
        ]
    },
    "sips": [
        {
            "name": "Poisson",
            "ref": {
                "source": "rng",
                "name": "HDR9"
            },
            "function": "Lookup_Table",
            "metadata": {
                "Lambda": 0.5,
                "Trial6": 1,
                "Trial23": 2,
                "Trial299": 3,
                "histogram": [
                    0.606531,
                    0.303265,
                    0.075816,
                    0.012636,
                    0.00158,
                    0.000158
                ]
            },
            "arguments": {
```


U01 section refers to a uniform random variable on 0 to 1.

rng stands for random number generator, which in this case is named “HDR9” and is an HDR2.0 function (current HDR Generator with an iteration counter and 4 seeds). In theory other RNGs could be supported as well.

The arguments of the HDR are the Monte Carlo iteration counter (PM_Index), and the four seeds as specified.

The SIPs section starts here. This example has only one.

This SIP is named “Poisson” and is driven by a lookup table and HDR9.

The function is a Lookup Table of the probabilities and values.

Metadata includes the Lambda and three specific trials for calibration. In addition, it includes data for a histogram graph.

The arguments are the values in the lookup table, where the first argument is a probability and the second argument is the discrete value.

```
            "value": [
                [
                    0.606530660,
                    0
                ],
                [
                    0.909795990,
                    1
                ],
                [
                    0.985612322,
                    2
                ],
                [
                    0.998248377,
                    3
                ],
                [
                    0.999827884,
                    4
                ],
                [
                    0.999985835,
                    5
                ],
                [
                    0.999998998,
                    6
                ],
                [
                    0.999999938,
                    7
                ],
                [
                    0.999999997,
                    8
                ],
                [
                    1.000000000,
                    9
                ]
            ]
        }
    }
]
```

```
}
```