```
import numpy as np

class ObjectiveSpace:
    def __init__(self, num_dimensions):
        self.num_dimensions =
num_dimensions
        self.points = []

    def add_point(self, coordinates):
        # Add a point to the objective space
        if len(coordinates) ==
self.num_dimensions:
            self.points.append(coordinates)
        else:
            print("Error: Number of
coordinates does not match number of
dimensions.")

    def visualize(self):
        # Visualize the objective space
        # This is a simplified example; actual
visualization methods may vary
```

```
        print("Objective Space:")
        for point in self.points:
            print(point)

# Example usage:
objective_space =
ObjectiveSpace(num_dimensions=3)
objective_space.add_point([0.8, 0.2,
0.5])  # Example performance metrics
objective_space.add_point([0.6, 0.4,
0.7])  # Example constraints
objective_space.add_point([0.9, 0.1,
0.8])  # Example preferences
objective_space.add_point([0.4, 0.6,
0.3])  # Example user-defined goals

objective_space.visualize()
```