

```
!pip install pulp
```

```
Collecting pulp
  Downloading pulp-3.1.1-py3-none-any.whl.metadata (1.3 kB)
  Downloading pulp-3.1.1-py3-none-any.whl (16.4 MB)
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Installing collected packages: pulp
Successfully installed pulp-3.1.1
```

```
from pulp import LpMaximize, LpProblem, LpVariable, lpSum
model = LpProblem(name="maximize_profit", sense=LpMaximize)
A = LpVariable(name="Product_A", lowBound=0, cat="Continuous")
B = LpVariable(name="Product_B", lowBound=0, cat="Continuous")
model += 30 * A + 50 * B, "Total Profit"
model += (2 * A + 4 * B <= 40, "Labor Constraint")
model += (3 * A + 5 * B <= 50, "Material Constraint")
model.solve()
print(f"Optimal Production of Product A: {A.varValue}")
print(f"Optimal Production of Product B: {B.varValue}")
print(f"Total Maximum Profit: ${model.objective.value()}")
```

```
Optimal Production of Product A: 0.0
Optimal Production of Product B: 10.0
Total Maximum Profit: $500.0
```

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