Sample Output:

* Heatmap generated for best schedule based on program output:

![A graph with numbers and a number of hours

Description automatically generated with medium confidence]()

* Best schedule generated by the program:

/Users/nithinreddy/PycharmProjects/Genetic\_Algorithm\_project/venv/bin/python /Users/nithinreddy/PycharmProjects/Genetic\_Algorithm\_project/main.py

Best schedule after 500 generations:

[

{

"activity\_name": "SLA100A",

"room": "Frank 119",

"time": "1 PM",

"facilitator": "Glen",

"room\_size": 60,

"expected\_enrollment": 50,

"preferred\_facilitators": [

"Glen",

"Lock",

"Banks",

"Zeldin"

],

"other\_facilitators": [

"Numen",

"Richards"

]

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"activity\_name": "SLA100B",

"room": "Beach 201",

"time": "1 PM",

"facilitator": "Zeldin",

"room\_size": 60,

"expected\_enrollment": 50,

"preferred\_facilitators": [

"Glen",

"Lock",

"Banks",

"Zeldin"

],

"other\_facilitators": [

"Numen",

"Richards"

]

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{

"activity\_name": "SLA191A",

"room": "Loft 310",

"time": "10 AM",

"facilitator": "Tyler",

"room\_size": 108,

"expected\_enrollment": 50,

"preferred\_facilitators": [

"Glen",

"Lock",

"Banks",

"Zeldin"

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"other\_facilitators": [

"Numen",

"Richards"

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"activity\_name": "SLA191B",

"room": "Loft 310",

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"Banks",

"Zeldin"

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"other\_facilitators": [

"Numen",

"Richards"

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"activity\_name": "SLA201",

"room": "Logos 325",

"time": "3 PM",

"facilitator": "Banks",

"room\_size": 450,

"expected\_enrollment": 50,

"preferred\_facilitators": [

"Glen",

"Banks",

"Zeldin",

"Shaw"

],

"other\_facilitators": [

"Numen",

"Richards",

"Singer"

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"activity\_name": "SLA291",

"room": "Logos 325",

"time": "2 PM",

"facilitator": "Banks",

"room\_size": 450,

"expected\_enrollment": 50,

"preferred\_facilitators": [

"Lock",

"Banks",

"Zeldin",

"Singer"

],

"other\_facilitators": [

"Numen",

"Richards",

"Shaw",

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"activity\_name": "SLA303",

"room": "Loft 206",

"time": "10 AM",

"facilitator": "Zeldin",

"room\_size": 75,

"expected\_enrollment": 60,

"preferred\_facilitators": [

"Glen",

"Zeldin",

"Banks"

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"other\_facilitators": [

"Numen",

"Singer",

"Shaw"

]

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{

"activity\_name": "SLA304",

"room": "Roman 216",

"time": "1 PM",

"facilitator": "Shaw",

"room\_size": 30,

"expected\_enrollment": 25,

"preferred\_facilitators": [

"Glen",

"Banks",

"Tyler"

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"other\_facilitators": [

"Numen",

"Singer",

"Shaw",

"Richards",

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"activity\_name": "SLA394",

"room": "Roman 201",

"time": "10 AM",

"facilitator": "Richards",

"room\_size": 50,

"expected\_enrollment": 20,

"preferred\_facilitators": [

"Tyler",

"Singer"

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"other\_facilitators": [

"Richards",

"Zeldin"

]

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{

"activity\_name": "SLA449",

"room": "Beach 301",

"time": "2 PM",

"facilitator": "Glen",

"room\_size": 75,

"expected\_enrollment": 60,

"preferred\_facilitators": [

"Tyler",

"Singer",

"Shaw"

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"other\_facilitators": [

"Zeldin",

"Uther",

"Richards",

"Banks"

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"activity\_name": "SLA451",

"room": "Logos 325",

"time": "2 PM",

"facilitator": "Zeldin",

"room\_size": 450,

"expected\_enrollment": 100,

"preferred\_facilitators": [

"Tyler",

"Singer",

"Shaw"

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"other\_facilitators": [

"Zeldin",

"Uther",

"Richards",

"Banks"

]

}

]

Best fitness: 1.4499999999999997

Process finished with exit code 0