

Validation

Input: 100 0.2 4

Console output:

```
l1ltra001@Tracey1201:/mnt/c/Users/trace/UCT/CSC2002S/Assignments/PCP1$ make run ARGS="100 0.2 4"
java -cp SoloLevelling DungeonHunter 100 0.2 4
    dungeon size: 100,
    rows: 1000, columns: 1000
    x: [-100.000000, 100.000000], y: [-100.000000, 100.000000]
    Number searches: 40000

    time: 157 ms
    number dungeon grid points evaluated: 603966 (60%)
Dungeon Master (mana 110115) found at: x=47.2 y=81.6

map saved to visualiseSearch.png
map saved to visualiseSearchPath.png
```

Figure 1: Serial Program Output

```
l1ltra001@Tracey1201:/mnt/c/Users/trace/UCT/CSC2002S/Assignments/PCP1$ java DungeonHunterParallel.java 100 0.2 4
    dungeon size: 100,
    rows: 1000, columns: 1000
    x: [-100.000000, 100.000000], y: [-100.000000, 100.000000]
    Number searches: 40000

    time: 56 ms
    number dungeon grid points evaluated: 603966 (60%)
Dungeon Master (mana 110115) found at: x=47.2 y=81.6

map saved to visualiseSearchParallel.png
map saved to visualiseSearchPathParallel.png
```

Figure 2: Parallel Program Output

Beyond Compare results

Picture Compare

Produced: 2025/08/17 12:18:13

Left file:

C:\Users\trace\UCT\CSC2002S\Assignments\PCP1\visualiseSearch.png

Right file:

C:\Users\trace\UCT\CSC2002S\Assignments\PCP1\visualiseSearchParallel.pn

g

1000000 same pixel(s)

Refer to Report.txt in the attachments.

Input: 200 0.2 4

Console output:

```
l1ltra001@Tracey1201:/mnt/c/Users/trace/UCT/CSC2002S/Assignments/PCP1$ make run ARGS="200 0.2 4"
java -cp SoloLevelling DungeonHunter 200 0.2 4
    dungeon size: 200,
    rows: 2000, columns: 2000
    x: [-200.000000, 200.000000], y: [-200.000000, 200.000000]
    Number searches: 160000

    time: 640 ms
    number dungeon grid points evaluated: 2405613 (60%)
Dungeon Master (mana 116316) found at: x=90.8 y=167.8

map saved to visualiseSearch.png
map saved to visualiseSearchPath.png
```

Figure 3: Serial Program Output

```
l1ltra001@Tracey1201:/mnt/c/Users/trace/UCT/CSC2002S/Assignments/PCP1$ java DungeonHunterParallel.java 200 0.2 4
dungeon size: 200,
rows: 2000, columns: 2000
x: [-200.000000, 200.000000], y: [-200.000000, 200.000000]
Number searches: 160000

time: 223 ms
number dungeon grid points evaluated: 2405623 (60%)
Dungeon Master (mana 116316) found at: x=90.8 y=167.8

map saved to visualiseSearchParallel.png
map saved to visualiseSearchPathParallel.png
```

Figure 4: Serial Program Output

Picture Compare

Produced: 2025/08/17 12:31:09

Left file:

C:\Users\trace\UCT\CSC2002S\Assignments\PCP1\visualiseSearch.png

Right file:

C:\Users\trace\UCT\CSC2002S\Assignments\PCP1\visualiseSearchParallel.pn

g

4000000 same pixel(s)

Refer to Report2.txt in the attachments.