

Project2

Written By:

Harry Deffebach 6448-5421

Alexander Banard 1149-9964

How to run:

Before:

```
cd project2
```

Compile with:

```
mix escript.build
```

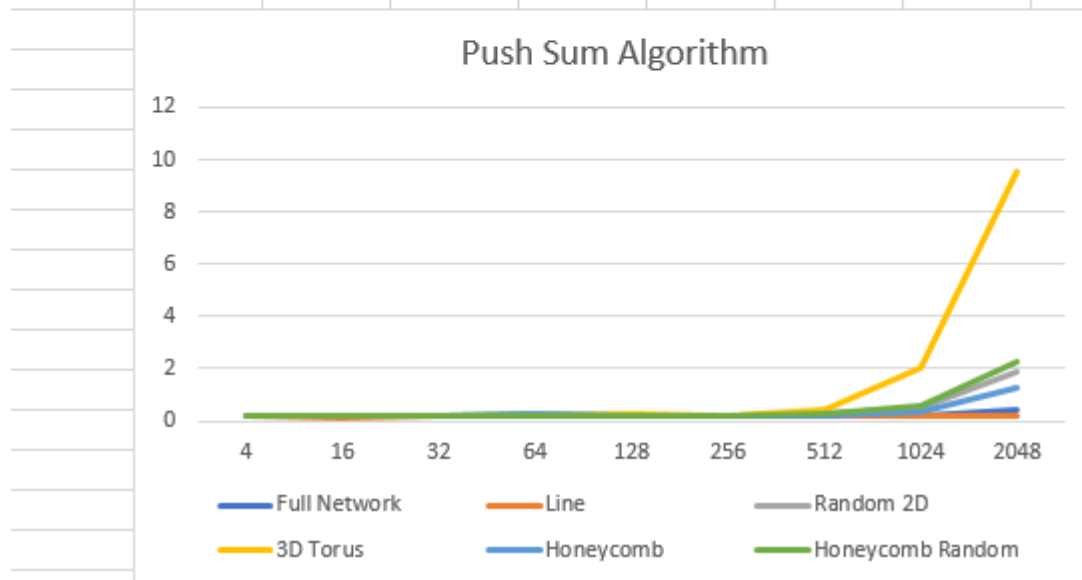
Run with:

```
escript project2 num_nodes "topology" "algorithm"
```

```
./project2 num_nodes "topology" "algorithm"
```

Graphs:

| | Full Netw | Line | Random 2 | 3d Torus | Honeycomb | Random Honeycomb | |
|------|-----------|-------|----------|----------|-----------|------------------|--|
| 4 | 0.168 | 0.183 | 0.171 | 0.171 | 0.172 | 0.18 | |
| 16 | 0.17 | 0.169 | 0.179 | 0.165 | 0.181 | 0.205 | |
| 32 | 0.168 | 0.178 | 0.226 | 0.186 | 0.172 | 0.196 | |
| 64 | 0.195 | 0.211 | 0.302 | 0.198 | 0.246 | 0.182 | |
| 128 | 0.192 | 0.174 | 0.198 | 0.257 | 0.19 | 0.214 | |
| 256 | 0.217 | 0.177 | 0.214 | 0.198 | 0.175 | 0.18 | |
| 512 | 0.197 | 0.175 | 0.248 | 0.463 | 0.187 | 0.239 | |
| 1024 | 0.218 | 0.175 | 0.527 | 2.029 | 0.386 | 0.61 | |
| 2048 | 0.461 | 0.198 | 1.914 | 9.533 | 1.305 | 2.279 | |



| | Full Netw | Line | Random 2 | 3d Torus C | Honeycon | Random Honeycomb | | |
|------|-----------|-------|----------|------------|----------|------------------|--|--|
| 4 | 0.167 | 0.195 | 0.164 | 0.179 | 0.157 | 0.172 | | |
| 16 | 0.166 | 0.182 | 0.15 | 0.165 | 0.157 | 0.155 | | |
| 32 | 0.166 | 0.152 | 0.176 | 0.165 | 0.167 | 0.168 | | |
| 64 | 0.17 | 0.153 | 0.177 | 0.164 | 0.169 | 0.171 | | |
| 128 | 0.187 | 0.166 | 0.199 | 0.177 | 0.168 | 0.177 | | |
| 256 | 0.197 | 0.153 | 0.193 | 0.209 | 0.17 | 0.187 | | |
| 512 | 0.173 | 0.23 | 0.425 | 0.187 | 0.187 | 0.25 | | |
| 1024 | 0.833 | 0.185 | 0.485 | 1.947 | 0.295 | 0.509 | | |
| 2048 | 2.101 | 0.179 | 1.635 | 9.916 | 1.367 | 2.418 | | |

