Testing average cycles for selfish strength 1.5  
Number of cycles run: 8262  
Number of cycles run: 12505  
Number of cycles run: 882  
Number of cycles run: 29522  
Number of cycles run: 5762  
Number of cycles run: 7447  
Number of cycles run: 20051  
Number of cycles run: 11453  
Number of cycles run: 5442  
Number of cycles run: 2887  
Number of cycles run: 8600  
Number of cycles run: 2135  
Number of cycles run: 10507  
Number of cycles run: 8867  
Number of cycles run: 50000  
Number of cycles run: 5806  
Number of cycles run: 6433  
Number of cycles run: 50000  
Number of cycles run: 6906  
Number of cycles run: 4266  
Number of cycles run: 25805  
Number of cycles run: 12203  
Number of cycles run: 50000  
Number of cycles run: 23160  
Number of cycles run: 16376  
Number of cycles run: 9760  
Number of cycles run: 14986  
Number of cycles run: 10079  
Number of cycles run: 19524  
Number of cycles run: 5275  
Number of cycles run: 3430  
Number of cycles run: 4926  
Number of cycles run: 13861  
Number of cycles run: 22641  
Number of cycles run: 1472  
Number of cycles run: 7126  
Number of cycles run: 594  
Number of cycles run: 14571  
Number of cycles run: 5506  
Number of cycles run: 12013  
Number of cycles run: 5848  
Number of cycles run: 6527  
Number of cycles run: 8110  
Number of cycles run: 4393  
Number of cycles run: 1818  
Number of cycles run: 10641  
Number of cycles run: 10204  
Number of cycles run: 5204  
Number of cycles run: 1397  
Number of cycles run: 786  
Av cycles for selfish strength 1.5 is 11719  
standard diviation is 11815.862363080627  
Testing average cycles for selfish strength 1.5  
Number of cycles run: 23697  
Number of cycles run: 3904  
Number of cycles run: 5982  
Number of cycles run: 50000  
Number of cycles run: 50000  
Number of cycles run: 20316  
Number of cycles run: 9088  
Number of cycles run: 6963  
Number of cycles run: 7905  
Number of cycles run: 8094  
Number of cycles run: 6440  
Number of cycles run: 26691  
Number of cycles run: 7376  
Number of cycles run: 12319  
Number of cycles run: 516  
Number of cycles run: 50000  
Number of cycles run: 1282  
Number of cycles run: 1569  
Number of cycles run: 50000  
Number of cycles run: 19122  
Number of cycles run: 11276  
Number of cycles run: 11306  
Number of cycles run: 4759  
Number of cycles run: 5664  
Number of cycles run: 4805  
Number of cycles run: 7796  
Number of cycles run: 19954  
Number of cycles run: 17121  
Number of cycles run: 6903  
Number of cycles run: 1163  
Number of cycles run: 510  
Number of cycles run: 26331  
Number of cycles run: 18879  
Number of cycles run: 552  
Number of cycles run: 3786  
Number of cycles run: 43707  
Number of cycles run: 3388  
Number of cycles run: 15517  
Number of cycles run: 15395  
Number of cycles run: 18109  
Number of cycles run: 12079  
Number of cycles run: 32898  
Number of cycles run: 6844  
Number of cycles run: 50000  
Number of cycles run: 8356  
Number of cycles run: 4002  
Number of cycles run: 11498  
Number of cycles run: 50000  
Number of cycles run: 26758  
Number of cycles run: 38060  
Av cycles for selfish strength 1.5 is 16773  
standard diviation is 15734.00932206851  
Testing average cycles for selfish strength 1.5  
Number of cycles run: 13606  
Number of cycles run: 12817  
Number of cycles run: 6677  
Number of cycles run: 13076  
Number of cycles run: 50000  
Number of cycles run: 1620  
Number of cycles run: 13993  
Number of cycles run: 50000  
Number of cycles run: 50000  
Number of cycles run: 3380  
Number of cycles run: 3296  
Number of cycles run: 50000  
Number of cycles run: 10090  
Number of cycles run: 4521  
Number of cycles run: 32688  
Number of cycles run: 8842  
Number of cycles run: 5735  
Number of cycles run: 10514  
Number of cycles run: 7534  
Number of cycles run: 10409  
Number of cycles run: 9352  
Number of cycles run: 7894  
Number of cycles run: 14166  
Number of cycles run: 5831  
Number of cycles run: 16094  
Number of cycles run: 14157  
Number of cycles run: 50000  
Number of cycles run: 8497  
Number of cycles run: 11006  
Number of cycles run: 4207  
Number of cycles run: 45908  
Number of cycles run: 4350  
Number of cycles run: 19037  
Number of cycles run: 1172  
Number of cycles run: 6833  
Number of cycles run: 6463  
Number of cycles run: 9388  
Number of cycles run: 1369  
Number of cycles run: 12233  
Number of cycles run: 50000  
Number of cycles run: 50000  
Number of cycles run: 10332  
Number of cycles run: 543  
Number of cycles run: 828  
Number of cycles run: 3892  
Number of cycles run: 23880  
Number of cycles run: 11304  
Number of cycles run: 7244  
Number of cycles run: 12211  
Number of cycles run: 50000  
Av cycles for selfish strength 1.5 is 16539  
standard diviation is 16648.04877858921  
Testing average cycles for selfish strength 1.5  
Number of cycles run: 8226  
Number of cycles run: 50000  
Number of cycles run: 10630  
Number of cycles run: 17325  
Number of cycles run: 1104  
Number of cycles run: 50000  
Number of cycles run: 7110  
Number of cycles run: 9550  
Number of cycles run: 3878  
Number of cycles run: 13518  
Number of cycles run: 2239  
Number of cycles run: 50000  
Number of cycles run: 5997  
Number of cycles run: 24045  
Number of cycles run: 7146  
Number of cycles run: 722  
Number of cycles run: 16039  
Number of cycles run: 4609  
Number of cycles run: 6862  
Number of cycles run: 3835  
Number of cycles run: 9091  
Number of cycles run: 8703  
Number of cycles run: 18818  
Number of cycles run: 8110  
Number of cycles run: 802  
Number of cycles run: 50000  
Number of cycles run: 29413  
Number of cycles run: 50000  
Number of cycles run: 5053  
Number of cycles run: 50000  
Number of cycles run: 887  
Number of cycles run: 4795  
Number of cycles run: 21508  
Number of cycles run: 4138  
Number of cycles run: 5450  
Number of cycles run: 50000  
Number of cycles run: 50000  
Number of cycles run: 11444  
Number of cycles run: 7345  
Number of cycles run: 7540  
Number of cycles run: 13408  
Number of cycles run: 8756  
Number of cycles run: 50000  
Number of cycles run: 14967  
Number of cycles run: 50000  
Number of cycles run: 3785  
Number of cycles run: 11564  
Number of cycles run: 7865  
Number of cycles run: 30292  
Number of cycles run: 16824  
Av cycles for selfish strength 1.5 is 17867

17499

For Your Information :-

1. The command to change your password is "passwd" - use it regularly.

2. Your use of this computer system is subject to the University's

policy on Use of Computer Systems, to which all account owners have

already agreed. See http://campus.leeds.ac.uk/isms for details.

3. Please report any problems via

https://intranet.engineering.leeds.ac.uk/it/help/

You will be issued with a request ticket via email.

There may be people using this system remotely - please do

not power it off without authorisation from Faculty IT staff.

[ml16m6y@comp-pc6067 ml16m6y]$ cd Downloads

[ml16m6y@comp-pc6067 Downloads]$ module add anaconda3/4.4.0

[ml16m6y@comp-pc6067 Downloads]$ python schooling\_self\_1.5.py idle

Testing average cycles for selfish strength 1.5

Number of cycles run: 3196

Number of cycles run: 9098

Number of cycles run: 8148

Number of cycles run: 5056

Number of cycles run: 974

Number of cycles run: 27669

Number of cycles run: 8331

Number of cycles run: 3104

Number of cycles run: 1195

Number of cycles run: 16497

Number of cycles run: 17935

Number of cycles run: 8954

Number of cycles run: 824

Number of cycles run: 519

Number of cycles run: 11892

Number of cycles run: 16144

Number of cycles run: 12474

Number of cycles run: 50000

Number of cycles run: 9018

Number of cycles run: 1421

Number of cycles run: 22050

Number of cycles run: 8326

Number of cycles run: 9875

Number of cycles run: 7435

Number of cycles run: 652

Number of cycles run: 8873

Number of cycles run: 7972

Number of cycles run: 3383

Number of cycles run: 4027

Number of cycles run: 13786

Number of cycles run: 9564

Number of cycles run: 8114

Number of cycles run: 43532

Number of cycles run: 1038

Number of cycles run: 9165

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 8667

Number of cycles run: 7787

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 19511

Number of cycles run: 29293

Number of cycles run: 15484

Number of cycles run: 4949

Number of cycles run: 5329

Number of cycles run: 7862

Number of cycles run: 42089

Number of cycles run: 11403

Number of cycles run: 10277

Av cycles for selfish strength 1.5 is 14657

standard diviation is 15015.3026873

Testing average cycles for selfish strength 1.5

Number of cycles run: 12697

Number of cycles run: 8508

Number of cycles run: 594

Number of cycles run: 1879

Number of cycles run: 17026

Number of cycles run: 4627

Number of cycles run: 12688

Number of cycles run: 14011

Number of cycles run: 30813

Number of cycles run: 50000

Number of cycles run: 6431

Number of cycles run: 50000

Number of cycles run: 1039

Number of cycles run: 7628

Number of cycles run: 5591

Number of cycles run: 7183

Number of cycles run: 50000

Number of cycles run: 7070

Number of cycles run: 10518

Number of cycles run: 12531

Number of cycles run: 23193

Number of cycles run: 48048

Number of cycles run: 11386

Number of cycles run: 7995

Number of cycles run: 13764

Number of cycles run: 42121

Number of cycles run: 8480

Number of cycles run: 5233

Number of cycles run: 12913

Number of cycles run: 1718

Number of cycles run: 50000

Number of cycles run: 851

Number of cycles run: 2754

Number of cycles run: 650

Number of cycles run: 14823

Number of cycles run: 7581

Number of cycles run: 4387

Number of cycles run: 10794

Number of cycles run: 36835

Number of cycles run: 4509

Number of cycles run: 32618

Number of cycles run: 11752

Number of cycles run: 3421

Number of cycles run: 23831

Number of cycles run: 2873

Number of cycles run: 8844

Number of cycles run: 2307

Number of cycles run: 6906

Number of cycles run: 1182

Number of cycles run: 3493

Av cycles for selfish strength 1.5 is 14321

standard diviation is 15055.705983

Testing average cycles for selfish strength 1.5

Number of cycles run: 8437

Number of cycles run: 22985

Number of cycles run: 50000

Number of cycles run: 4590

Number of cycles run: 10477

Number of cycles run: 7308

Number of cycles run: 18063

Number of cycles run: 2453

Number of cycles run: 14857

Number of cycles run: 11428

Number of cycles run: 490

Number of cycles run: 700

Number of cycles run: 10152

Number of cycles run: 50000

Number of cycles run: 9777

Number of cycles run: 6184

Number of cycles run: 3646

Number of cycles run: 693

Number of cycles run: 16079

Number of cycles run: 10383

Number of cycles run: 1377

Number of cycles run: 4299

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 8574

Number of cycles run: 12007

Number of cycles run: 50000

Number of cycles run: 12577

Number of cycles run: 1221

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 7363

Number of cycles run: 8719

Number of cycles run: 50000

Number of cycles run: 13506

Number of cycles run: 12497

Number of cycles run: 6536

Number of cycles run: 12254

Number of cycles run: 5644

Number of cycles run: 1128

Number of cycles run: 5870

Traceback (most recent call last):

File "schooling\_self\_1.5.py", line 861, in <module>

main()

File "schooling\_self\_1.5.py", line 158, in main

cycles = main\_loop()

File "schooling\_self\_1.5.py", line 250, in main\_loop

moveBoids()

File "schooling\_self\_1.5.py", line 405, in moveBoids

boid.moveToNewPos()

File "schooling\_self\_1.5.py", line 724, in moveToNewPos

newvel = add\_vectors( [newvel, self.boid\_predator\_repulsion(), self.boid\_boid\_selfish()])

File "schooling\_self\_1.5.py", line 844, in boid\_boid\_selfish

target = nearest\_boid\_to\_boid((self.x, self.y))

File "schooling\_self\_1.5.py", line 509, in nearest\_boid\_to\_boid

nearest\_boids = boids[1]

IndexError: list index out of range

[ml16m6y@comp-pc6067 Downloads]$ python schooling\_self\_1.5.py idle

Testing average cycles for selfish strength 1.5

Number of cycles run: 50000

Number of cycles run: 6809

Number of cycles run: 7225

Number of cycles run: 10845

Number of cycles run: 50000

Number of cycles run: 4753

Number of cycles run: 14252

Number of cycles run: 9370

Number of cycles run: 3604

Number of cycles run: 463

Number of cycles run: 18650

Number of cycles run: 4886

Number of cycles run: 3960

Number of cycles run: 8317

Number of cycles run: 6598

Number of cycles run: 13204

Number of cycles run: 5186

Number of cycles run: 11749

Number of cycles run: 12658

Number of cycles run: 1593

Number of cycles run: 9191

Number of cycles run: 7305

Number of cycles run: 9762

Number of cycles run: 18264

Number of cycles run: 50000

Number of cycles run: 14229

Number of cycles run: 45403

Number of cycles run: 9388

Number of cycles run: 50000

Number of cycles run: 9440

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 5860

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 9783

Number of cycles run: 37341

Number of cycles run: 6830

Number of cycles run: 4998

Number of cycles run: 50000

Number of cycles run: 5688

Number of cycles run: 14771

Number of cycles run: 50000

Number of cycles run: 4336

Number of cycles run: 5878

Number of cycles run: 11702

Number of cycles run: 15913

Number of cycles run: 11327

Number of cycles run: 15311

Number of cycles run: 505

Av cycles for selfish strength 1.5 is 18346

standard diviation is 17713.9468302