Tema : Evadarea Broscoceilor

Explicatii euristici:

Euristica banala: Daca nodul curent are o stare finala returneaza 0, altfel returneaza 1

Euristica admisibila_1: Calculeaza greutatea maxima a unei broaste ca minimul dintre greutatea maxima sustinuta de o frunza si numarul total de insecte, apoi genereaza toate nodurile la care poate sari avand greutatea maxima, genereaza toate drumurile posibile cu BFS pana intr-o stare finala. Returneaza minimul distantelor cu salt maxim

Euristica admisibila_2: Returneaza maximul distanetelor euclidiene pana la mal

Euristica neadmisibila: Aduna distanta tuturor frunzelor mai apropiate de mal decat frunza curenta

Comparatii algoritmi:

Fisier: nu_blocheaza.txt

Apel: python3 main.py folder_input folder_output 1 30

Algoritm	Lungime	Cost	Timp	Max noduri	Total noduri
BFS	3	4.23	0.11	15	379
DFS	7	7.41	0.04	6	41
DFI	3	4.23	0.05	15	130
A*(banala)	3	3.41	0.02	11	24
A*(1)	3	2.41	0.03	11	33
A*(2)	3	5.25	0.01	6	9
A*(neadm)	4	28.47	0.20	15	728
A*opt(banala)	3	3.41	0.03	11	24
A*opt(1)	3	2.41	0.04	11	33
A*opt(2)	3	5.25	0.01	6	9
A*opt(neadm)	4	28.47	3.26	15	728
IDA*(banala)	3	3.41	0.04	11	60
IDA*(1)	3	2.41	0.06	15	199
IDA*(2)	3	5.25	0.02	6	19
IDA*(neadm)	4	28.47	0.94	15	5700

Fisier: timeout.txt

Apel: python3 main.py folder_input folder_output 1 30

Algoritm	Lungime	Cost	Timp	Max noduri	Total noduri
BFS	-	-	-	-	-
DFS	-	-	-	-	-
DFI	4	11.12	25.10	193	70248
A*(banala)	-	-	-	-	-
A*(1)	-	-	-	-	-
A*(2)	4	14.89	4.46	170	6584
A*(neadm)	-	-	-	-	-
A*opt(banala)	-	-	-	-	-
A*opt(1)	-	-	-	-	-
A*opt(2)	-	-	-	-	-
A*opt(neadm)	-	-	-	-	-
IDA*(banala)	-	-	-	-	-
IDA*(1)	-	-	-	-	-
IDA*(2)	4	14.89	16.32	170	43969
IDA*(neadm)	-	-	-	-	-

Exemplu neadmisibila:

Fisier: nu_blocheaza.txt

6

Broscovina 5 id1

id0 2 3 1 20

id1 1 3 0 20

id2 2 5 5 20

id3 3 5 2 20

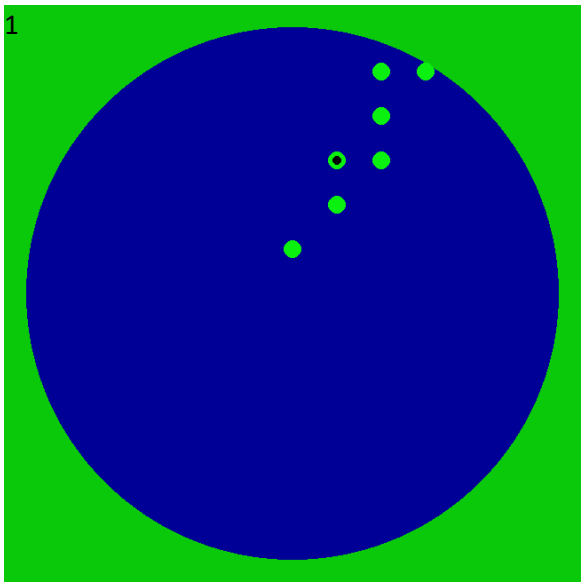
id4 0 1 5 10

id5 1 2 3 20

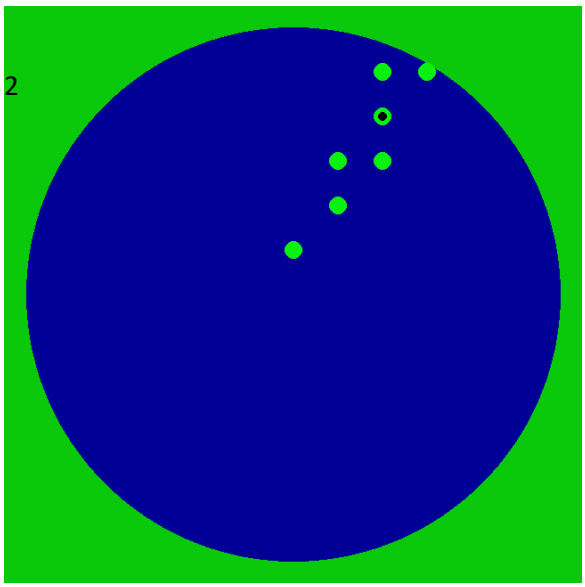
id6 2 4 0 10

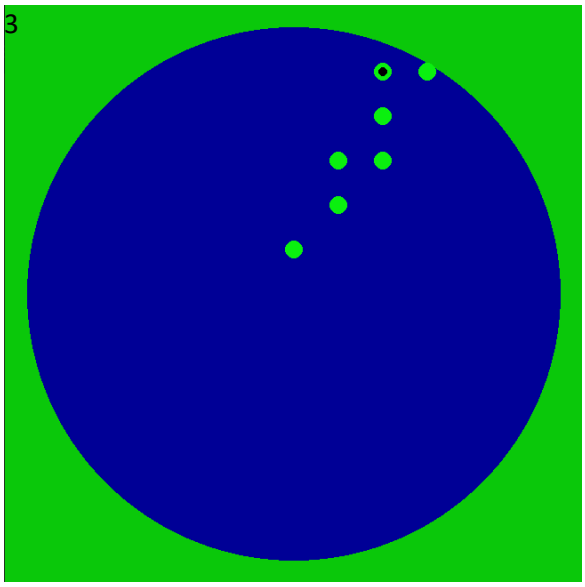
Algoritm A* admisibila_2:

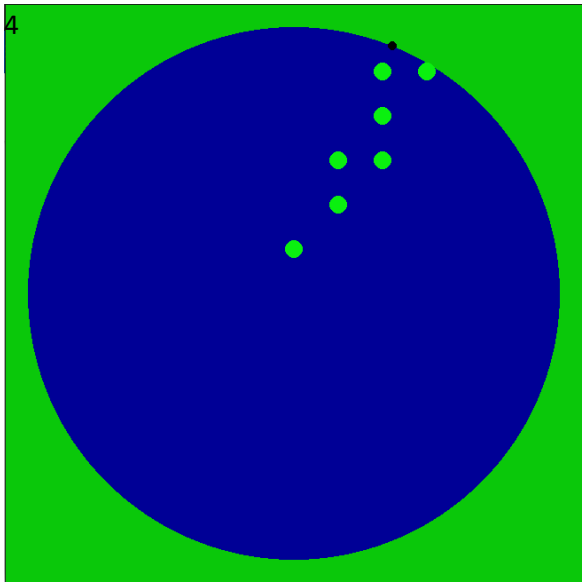
1



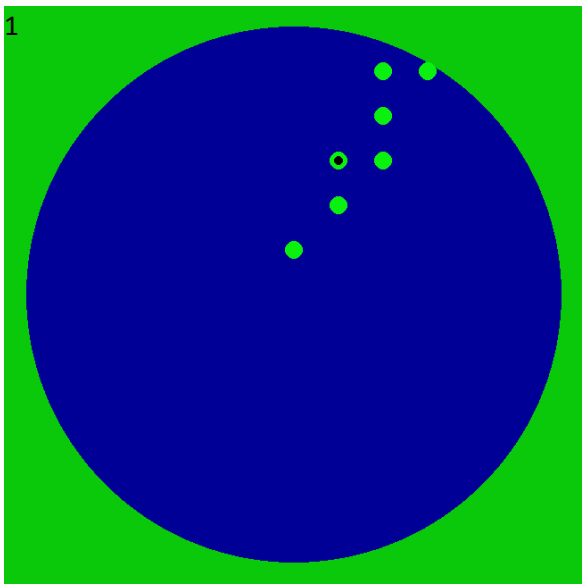
2



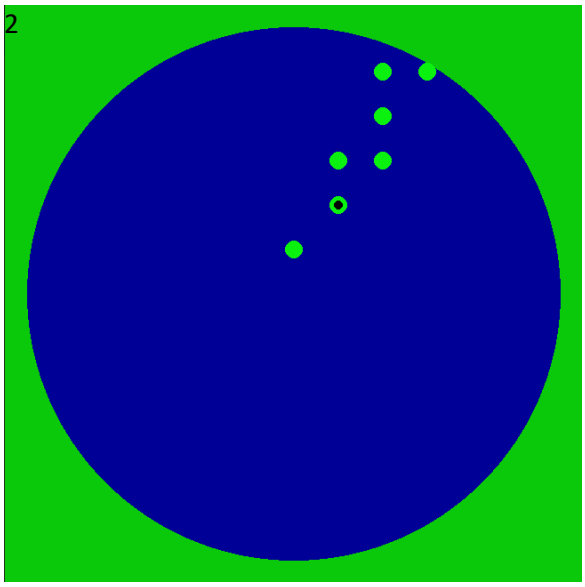




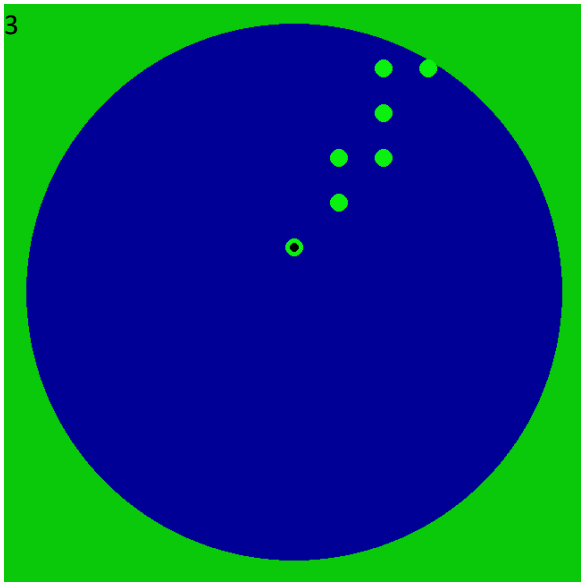
Algoritm A* neadmisibila:



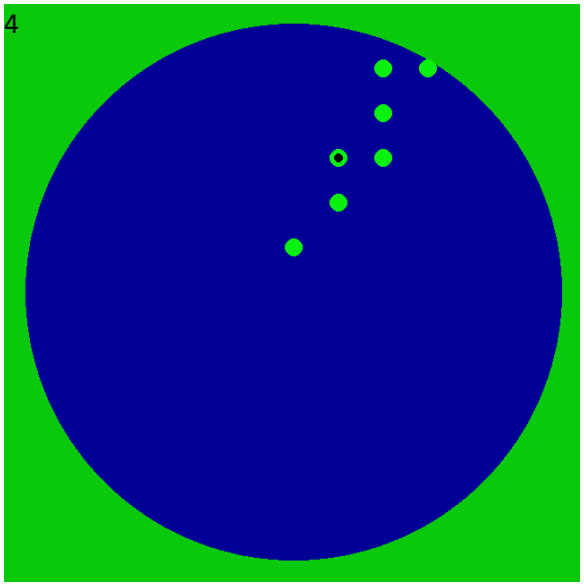
2

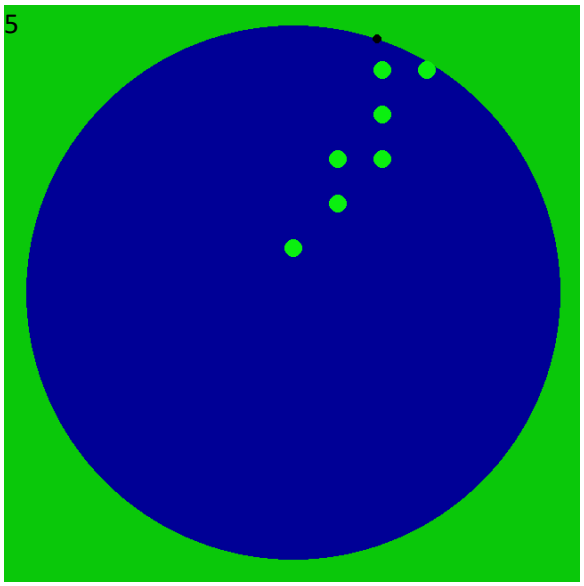


3



4




5