**MCS 253**

**HW 3**

[Read this first on what to submit for a homework.](https://drive.google.com/open?id=1vvTZzNrXNrxFCFVuzryEuAX6c8rfGERsEc7t4TS1vAA)

**HW 3.1 (50 points)**

Write a program that reads in a graphical maze from a text file, and determines a solution path.

Input:

* a graphical representation of a maze from a text file

Output:

* the solution path as both a string of cell numbers and graphical representation to stdout

Example 1:

input:

[sample\_maze.txt](https://drive.google.com/a/uci.edu/file/d/1MnCvG_XX25XGNhtXpYr21a37XUH05ZlB/view?usp=sharing)

output:

Solution Path: 0, 8, 16, 17, 18, 26, 27, 28, 29, 21, 20, 12, 4, 5, 6, 14, 22, 30, 38, 39

~~~~~~~~~~~~~~~~~~~~~

(start)

X X X X

X X X

X X X X X X

X X X X X

X X

(end)

~~~~~~~~~~~~~~~~~~~~~

**HW 3.2 (50 points)**

Write a program, called parseC, to parse a C++ program into tokens. You should recognize and discard program comments (/\* to \*/ or after //).

Input:

* a C++ program file

Output:

* the parsed program to stdout, one token per line

Example:

[input](https://drive.google.com/open?id=1haMDYvSQULgD9hTNFCJapZHN_s5sn3c0):

[sample\_cppProgram.cpp](https://drive.google.com/a/uci.edu/file/d/11-9Vgu9D__bU2KqUkZauOJCg1MeWnCfh/view?usp=sharing)

output:

#

include

<

stdio

.

h

>

int

main

(

int

argc

,

char

\*

argv

[

]

)

{

char

my\_char

=

‘A’

;

for

(

int

i

=

0

;

i

<

1024

;

++

i

)

printf

(

“\”Hello\” she said.\n”

)

;

}

**Possible LeetCode Substitutions (25 points each)**

**Important Notes:**

* You may only substitute 50pts-worth of LeetCode problems

Possible LeetCode Problems:









