Task: Design a DFA that will read in a string and replace every occurrence of CSE into DSC  
1. Define the State(s)

2. Write the transitions. Start with the major transitions and then the rest

3. Test your DFA with some test string. Here are some examples with input and output

CSE 30 covers DFA CCSSEEISHAHA CSACSBCSCACSECSE

4. Let’s code it up really quickly.

#include <stdlib.h>

#include <stdio.h>

#include <string.h>

#define START 0

#define C 1

#define S 2

int StateStart(char c){

  if(c=='C'){

    return C;

  }

  else{

    putchar(c);

    return START;

  }

}

int StateC(char c){

//do it yourself

}

int StateS(char c){

  if(c=='E'){

    putchar('D');

    putchar('S');

    putchar('C');

    return START;

  }

//Complete the rest

}

int main(){

  char str[] = "CSEDCSEECSE";

  int len = strlen(str);

  int currState = START;

  for(int i = 0; i < len; ++i){

    switch(currState){

      case START:

        currState=StateStart(str[i]);

        break;

      case C:

        currState = StateC(str[i]);

        break;

      case S:

        currState = StateS(str[i]);

    }

  }

}