Csc215 lab3 solution :

//////////////////////////////////////////////\*\*\*\*\*ex1.c

#include <stdio.h>

int main(){

 char sentence[255], ch;

 int i=0;

 printf("Please enter a sentence:\n");

 gets(sentence);

 while( (ch=sentence[i]) != '\0'){

 if (i==0 || sentence[i-1] == ' '){

 if (ch>='a' && ch<='z')

 sentence[i] -= ('a'-'A');

 }

 else {

 if (ch>='A' && ch<='Z')

 sentence[i] += ('a'-'A');

 }

 i++;

 }

 printf("%s\n", sentence);

 return 0;

}

///////////////////////////////////////////////////////////////////////ex2.c

#include <stdio.h>

int main(){

 float series;

 float term;

 int i;

 /\* Part 1 \*/

 series = 0;

 for (i = 1; i <= 1000; i++) {

 int sign = (i+1)%2 == 0? 1:-1;

 int isq = i\*i;

 int i5sq = (i+5)\*(i+5);

 term = (float)sign \* isq / i5sq;

 series += term;

 }

 printf("%f\n", series);

 /\* Part 2 \*/

 series = term = 0;

 i=0;

 do {

 series += term;

 i++;

 int sign = (i+1)%2 == 0? 1:-1;

 int isq = i\*i;

 int i5sq = (i+5)\*(i+5);

 term = (float)sign \* isq / i5sq;

 } while ( (series+term) < 0.5);

 printf("%d\n", i-1);

 return 0;

}

///////////////////////////////////////////////////////////ex3.c

 #include <stdio.h>

int main(){

 int n, i, j;

 printf("Enter a positive integer:");

 scanf("%d", &n);

 for (i=n; i>0; i--){

 for (j=1; j<=i; j++)

 printf("\*");

 printf("\n");

 }

 for (i=2; i<=n; i++){

 for (j=1; j<=i; j++)

 printf("\*");

 printf("\n");

 }

 return 0;

}

////////////////////////////////////////////////////assignment.c

 #include <stdio.h>

int main(){

 char sentence[255], ch;

 int i=0;

 int cA=0, cE=0, cI=0, cO=0, cU=0;

 printf("Please enter a sentence:\n");

 gets(sentence);

 while( (ch=sentence[i++]) != '\0')

 switch (ch){

 case 'A': case 'a': cA++; break;

 case 'E': case 'e': cE++; break;

 case 'I': case 'i': cI++; break;

 case 'O': case 'o': cO++; break;

 case 'U': case 'u': cU++;

 }

 printf("A:%d\tE:%d\tI:%d\tO:%d\tU:%d\n",

 cA, cE, cI, cO, cU);

 return 0;

}