/\*Structures (9-4-19)\*/

/\*store following info. of 2 students by using structure - Name/Roll No/Percentage\*/

#include <stdio.h>

#include <conio.h>

struct student{

int roll\_no;

char name [16];

float percentage;

};

void main(){

printf("18BCAN024\n\n");

struct student s1, s2;

printf("Enter Roll no, Name & Percentage of Student 1: ");

scanf("%d %s %f", &s1.roll\_no, s1.name, &s1.percentage);

printf("Enter Roll no, Name & Percentage of Student 2: ");

scanf("%d %s %f", &s2.roll\_no, s2.name, &s2.percentage);

printf("\nRoll No of Student 1: %d", s1.roll\_no);

printf("\nName of Student 1: %s", s1.name);

printf("\nPercentage of Student 1: %f", s1.percentage);

printf("\n\n");

printf("Roll No of Student 2: %d", s2.roll\_no);

printf("\nName of Student 2: %s", s2.name);

printf("\nPercentage of Student 2: %f", s2.percentage);

getch();

}

/\*Array of Structure (9-4-19)\*/

/\*store following info. of 2 students by using array of structure - Name/Roll No/Percentage\*/

#include <stdio.h>

#include <conio.h>

struct student{

int roll\_no;

char name[16];

float percentage;

};

void main(){

printf("18BCAN024\n\n");

struct student s[5];

int i;

for (i = 1; i <= 2; i++){

printf("Enter information regarding Student %d:\n", i);

scanf("%d%s%f", &s[i].roll\_no, s[i].name, &s[i].percentage);

}

printf("\n");

for (i = 1; i <= 2; i++){

printf("Roll No = %d\t Name = %s\t Percentage = %f\n", s[i].roll\_no, s[i].name, s[i].percentage);

}

getch();

}

/\*Nested Structures (9-4-19)\*/

#include <stdio.h>

#include <conio.h>

struct address {

int pin;

char city[10];

char state[10];

};

struct employee{

char name[16];

int sal;

struct address add;

};

void main(){

printf("18BCAN024\n\n");

struct employee e1;

printf("Enter information regarding employee 1 - Name, Salary, City, State & PIN:\n");

scanf("%s %d %s %s %d", e1.name, &e1.sal, e1.add.city, e1.add.state, &e1.add.pin);

printf("\nEntered Information about employee:\n");

printf("Name: %s\nSalary: %d\nCity: %s\nState: %s\nPIN: %d", e1.name, e1.sal, e1.add.city, e1.add.state, e1.add.pin);

getch();

}

/\*Structure within Functions using Call by Reference (9-4-19)\*/

/\*store height & width of 2 boxes using structure & swap them using call by address.\*/

#include <stdio.h>

#include <conio.h>

struct box {

int height;

int width;

};

void swap (struct box \*ptr1, struct box \*ptr2){

int t;

t = ptr1 -> height;

ptr1 -> height = ptr2 -> height;

ptr2 -> height = t;

t = ptr1 -> width;

ptr1 -> width = ptr2 -> width;

ptr2 -> width = t;

}

void main(){

printf("18BCAN024\n\n");

struct box b1, b2;

printf("Enter height & width of 1st box:\n");

scanf("%d%d", &b1.height, &b1.width);

printf("Enter height & width of 2nd box:\n");

scanf("%d%d", &b2.height, &b2.width);

printf("\nHeight & width of 1st box before swapping:\n");

printf("Height = %d, Width = %d\n", b1.height, b1.width);

printf("\nHeight & width of 2nd box before swapping:\n");

printf("Height = %d, Width = %d\n", b2.height, b2.width);

swap (&b1, &b2);

printf("\nHeight & width of 1st box after swapping:\n");

printf("Height = %d, Width = %d\n", b1.height, b1.width);

printf("\nHeight & width of 2nd box after swapping:\n");

printf("Height = %d, Width = %d\n", b2.height, b2.width);

getch();

}