Array assignment of c programing .

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Section or lab : 8

Electrical communication engineering.

Code 1:

```
#include <stdio.h>

#include <stdlib.h>


void find_date(int day_year, int year , int *day , int
*month);


int main()

{   int day , month , day_year , year , o;

   day=0;month=0;

   printf("please enter the year number\n");

   scanf("%d",&year);

   printf ("please enter the day_year number\n");
```

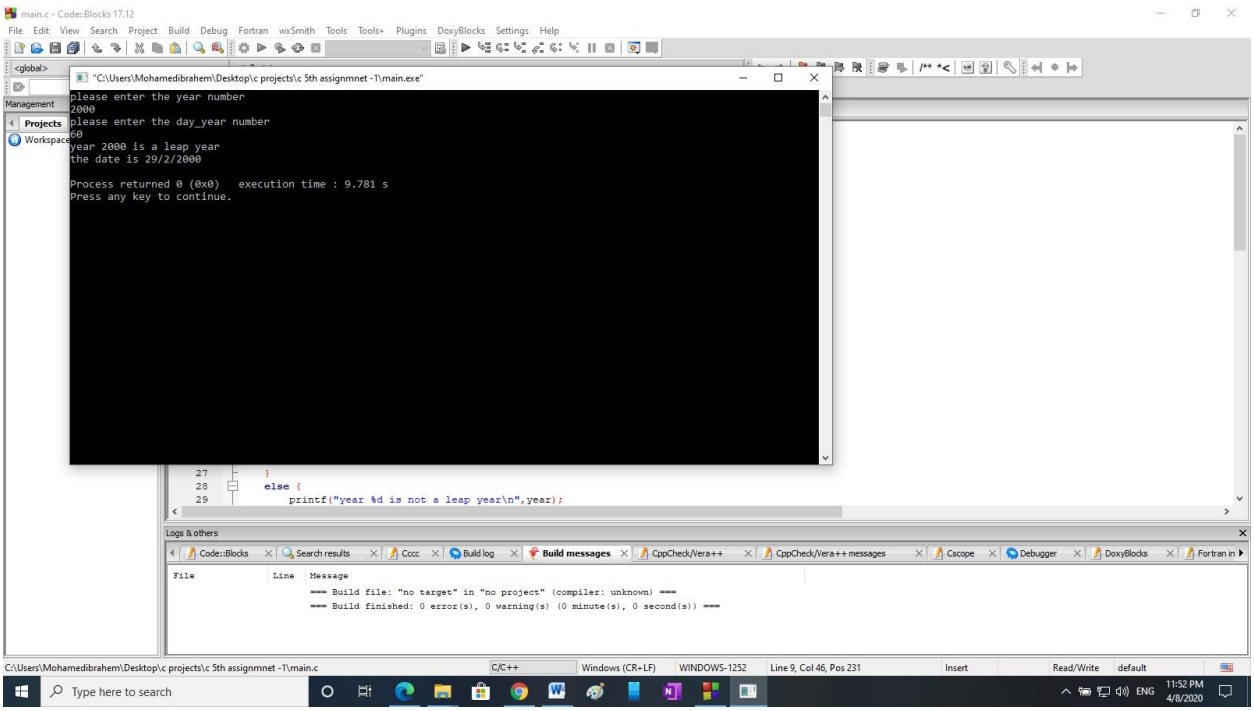
```
scanf ("%d",&day_year);
// check if it is a leap year
if (year%4==0){
   if (year%400==0){
      printf("year %d is a leap year\n",year);
      o=1;
   }
   else if (year%100==0){
      printf("year %d is not a leap year\n",year);
      o=0;
   }
   else {
      printf("year %d is a leap year\n",year);
      o=1;
   }
}
else {
```

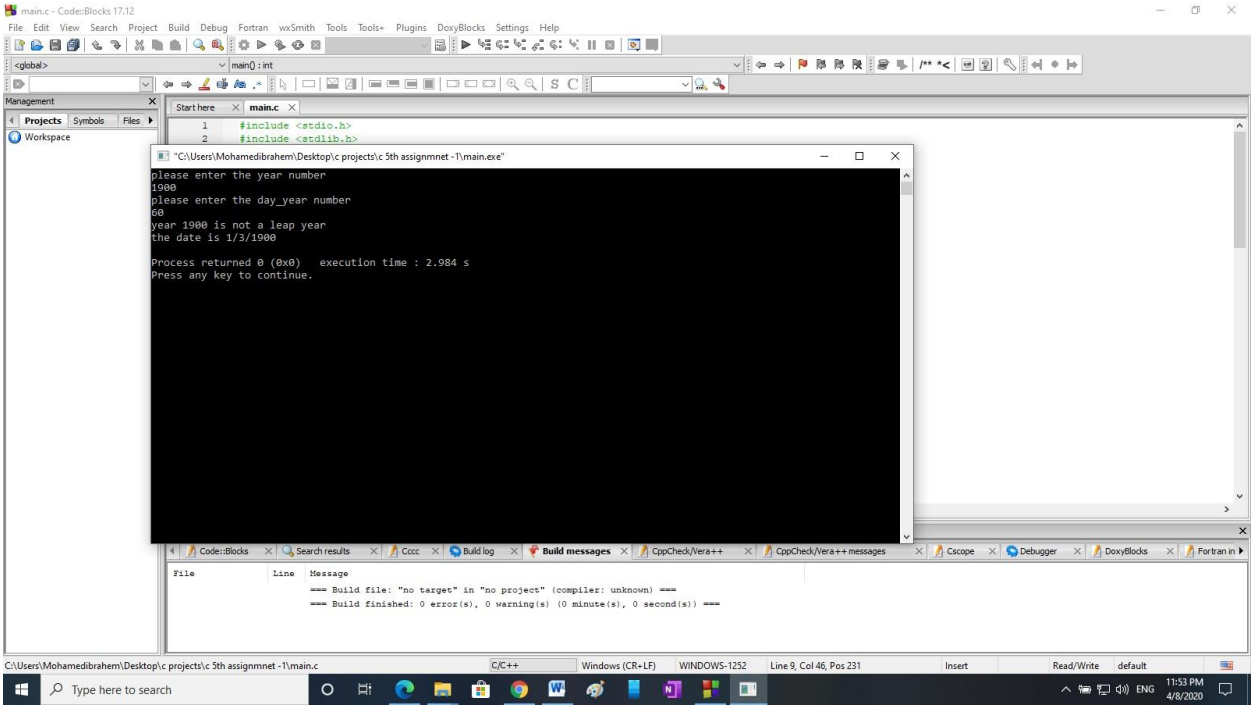
```
    printf("year %d is not a leap year\n",year);
    o=0;
  }
  //check that he entered a real day_year number
  while (day_year){
    if (o==0){
      if (1<day_year && day_year<=365)break;
      else {
        printf ("please enter the day_year number
from 1 to 366 again\n");
        scanf ("%d",&day_year);
      }
    }
    else if (o==1){
      if (1<=day_year && day_year<=366)break;
      else {
```

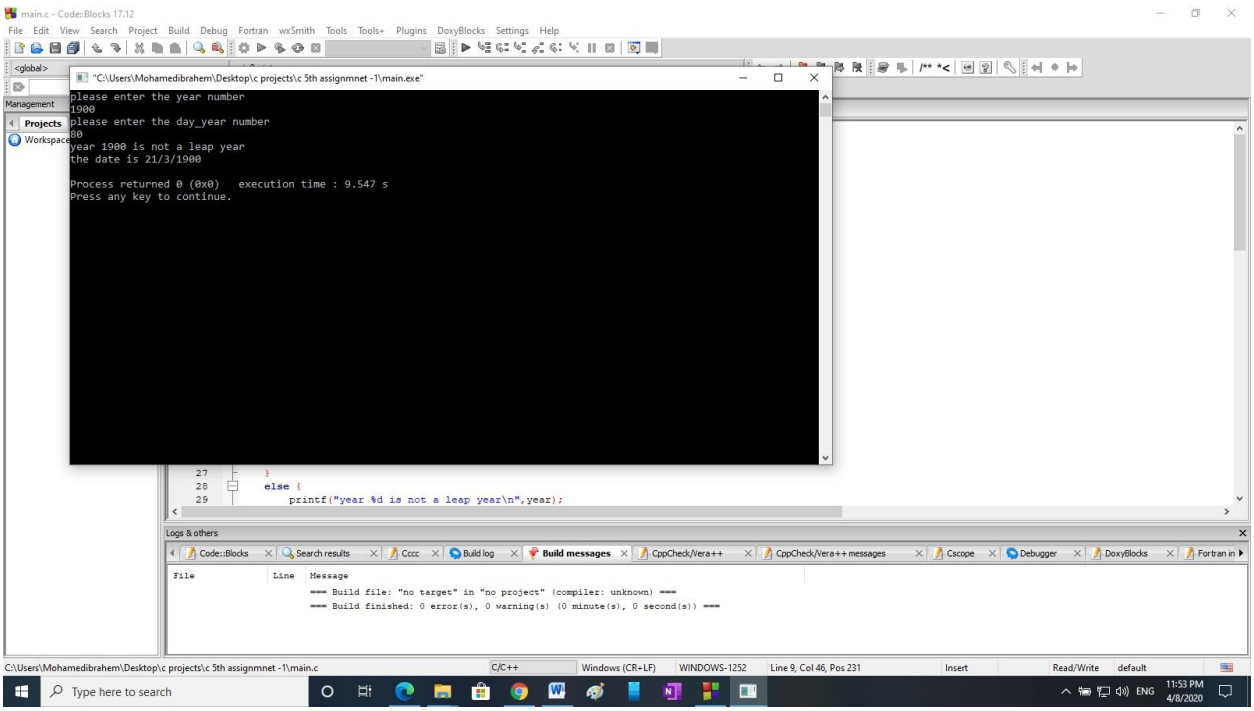
```
            printf ("please enter the day_year number
from 1 to 366 again\n");
            scanf ("%d",&day_year);
        }
      }
   }

   find_date(day_year,year,&day,&month);

   printf("the date is %d/%d/%d \n",day,month,year);
   return 0;
}

void find_date(int day_year, int year , int *day , int
*month)
{
   int o,i,k;
```

```
    i=0;

    // check again that it is a leap year or not
    if (year%4==0){
        if (year%400==0) o=1;
        else if (year%100==0) o=0;
        else o=1;
    }
    else o=0;

    int months [12]
={31,28,31,30,31,30,31,31,30,31,30,31};

    // when it is a leap year month [1]= 29 days and if it is
not it will be 28 days

    if (o==1) months[1]=29;
```

```
    else if (o==0) months[1]=28;


    while(day_year>0){
        day_year=day_year-months[i];
        i=i+1;
    }
    if(i==1 || i==3 || i==5 || i==7 || i==8 || i==10 ||
i==12 ) k= day_year + 31;
    else if(i==4 || i==6 || i==9 || i==11 ) k= day_year + 30;
    else if(i==2) k= day_year + months[1];
    *day =k;
    *month =i;
}
```


main.c - Code::Blocks 17.12
"C:\Users\Mohamedibrahem\Desktop\c projects\c 5th assignmnet -1\main.exe"
please enter the year number
2000
please enter the day_year number
60
year 2000 is a leap year
the date is 29/2/2000
Process returned 0 (0x0) execution time : 9.781 s
Press any key to continue.
else {
printf("year %d is not a leap year\n",year);
Logs & others
Build messages
=== Build file: "no target" in "no project" (compiler: unknown) ===
=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===
Type here to search
11:52 PM
4/8/2020


main.c - Code::Blocks 17.12
"C:\Users\Mohamedibrahem\Desktop\c projects\c 5th assignmnet -1\main.exe"
please enter the year number
1900
please enter the day_year number
60
year 1900 is not a leap year
the date is 1/3/1900
Process returned 0 (0x0) execution time : 2.984 s
Press any key to continue.
#include <stdio.h>
#include <stdlib.h>
Build messages
=== Build file: "no target" in "no project" (compiler: unknown) ===
=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===
Type here to search
11:53 PM
4/8/2020

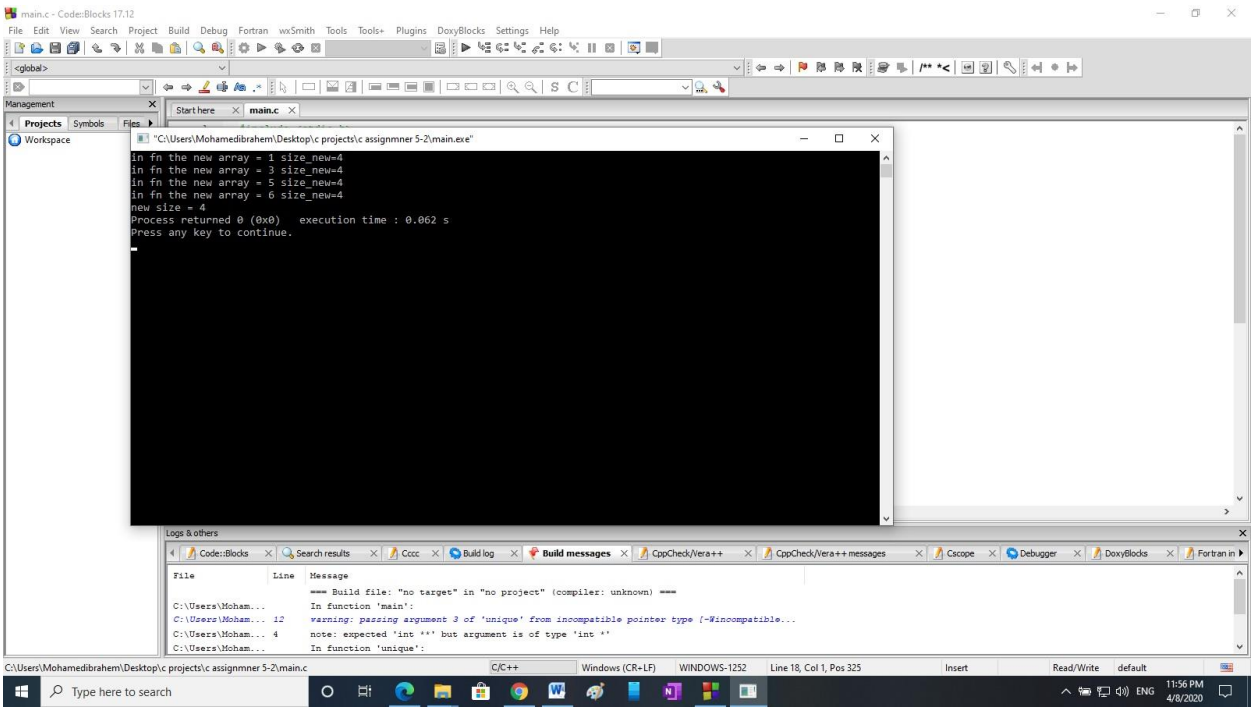

"C:\Users\Mohamedibrahem\Desktop\c projects\c 5th assignmnet -1\main.exe"
please enter the year number
1900
please enter the day_year number
80
year 1900 is not a leap year
the date is 21/3/1900
Process returned 0 (0x0) execution time : 9.547 s
Press any key to continue.
else {
printf("year %d is not a leap year\n",year);
Logs & others
Build messages
=== Build file: "no target" in "no project" (compiler: unknown) ===
=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s)) ===

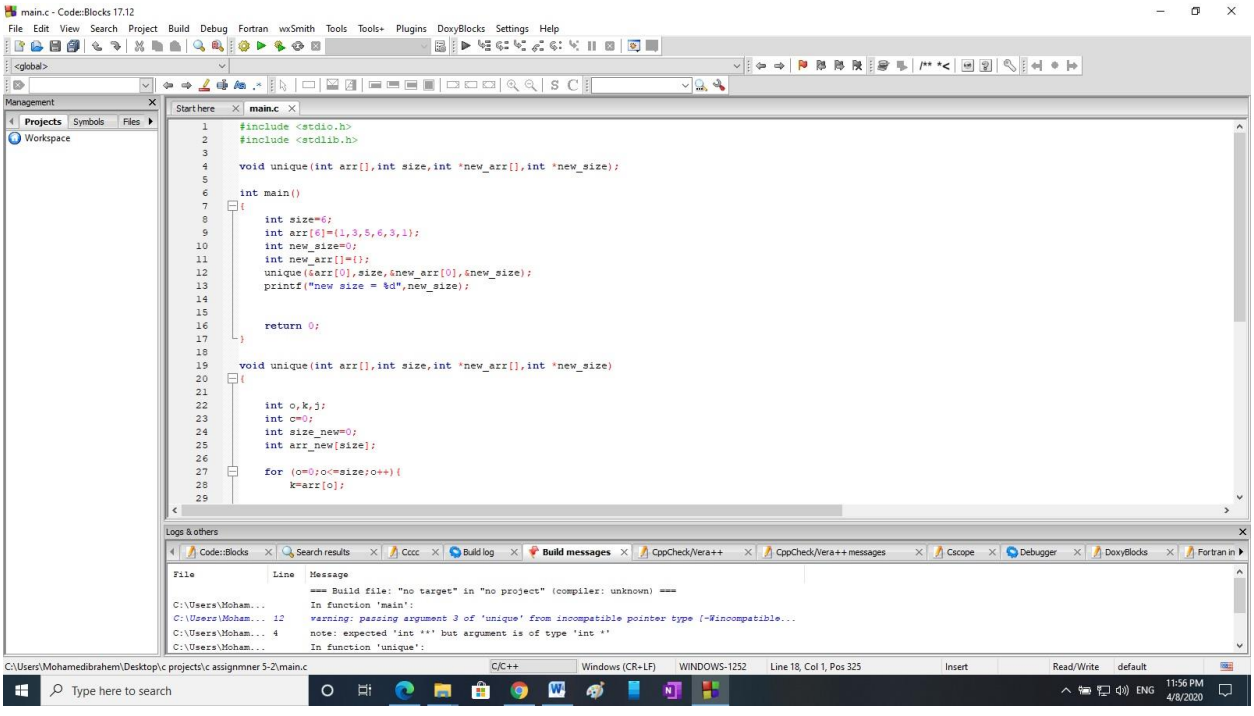
Code2

```
#include <stdio.h>

#include <stdlib.h>


void unique(int arr[],int size,int *new_arr[],int *new_size);


int main()

{

   int size=6;

   int arr[6]={1,3,5,6,3,1};

   int new_size=0;

   int new_arr[]={};

   unique(&arr[0],size,&new_arr[0],&new_size);

   printf("new size = %d",new_size);



   return 0;

}


void unique(int arr[],int size,int *new_arr[],int *new_size)
```

```
{

   int o,k,j;
   int c=0;
   int size_new=0;
   int arr_new[size];

   for (o=0;o<=size;o++){
      k=arr[o];

      for (j=(o-1);j>=0;j--){
         if (k==arr[j]){
            c=5;
         }
      }
      if (c==0){
         arr_new[size_new]=k;
         size_new++;
      }
     c=0;
   }
```

```
   for (int i=0;i<size_new;i++)
        {
        new_arr[i]=arr_new[i];
        printf("in fn the new array = %d
size_new=%d\n",new_arr[i],size_new);
        }
        *new_size=size_new;

}
```


main.c - Code::Blocks 17.12
"C:\Users\Mohamedibrahem\Desktop\c projects\c assignmner 5-2\main.exe"
in fn the new array = 1 size_new=4
in fn the new array = 3 size_new=4
in fn the new array = 5 size_new=4
in fn the new array = 6 size_new=4
new size = 4
Process returned 0 (0x0) execution time : 0.062 s
Press any key to continue.
Logs & others
Type here to search


main.c - Code::Blocks 17.12
#include <stdio.h>
#include <stdlib.h>
void unique(int arr[],int size,int *new_arr[],int *new_size);
int main()
{
int size=6;
int arr[6]={1,3,5,6,3,1};
int new_size=0;
int new_arr[]={};
unique(&arr[0],size,&new_arr[0],&new_size);
printf("new size = %d",new_size);
return 0;
}
void unique(int arr[],int size,int *new_arr[],int *new_size)
{
int o,k,j;
int c=0;
int size_new=0;
int arr_new[size];
for (o=0;o<=size;o++){
k=arr[o];
Logs & others
Type here to search