OBJECTIVE : Structure with functions and String Operations

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1. Write a C program that uses random number generation to create sentences. Use four arrays of strings called **article**, **noun**, **verb** and **preposition**. Create a sentence by selecting a word at random from each array in the following order; **article**, **noun**, **verb**, **preposition, article, noun**. As each word is picked, concatenate it to the previous words in the sentence. The words should be seperated by spaces. The program should generate 5 sentences.

The arrays should be initialized as follows;
```
char article[5][10] = { "the ", "a ", "one ", "some ","any " },
    noun[5][10] = { "bicycle", "bird", "dog", "bus", "car" },
    verb[5][10] = { " drove", " jumped", " ran", " walked", " flew" },
    preposition[5][10] = { " to ", " from ", " over ", " under ", " on " };
```

Project Name: LabGuide3_1
File Name: AQ1.cpp

Example Run:
```
Sentence 1: some car jumped under any bus.
Sentence 2: any bird jumped from some car.
Sentence 3: some car jumped under some bus.
Sentence 4: the bus jumped to any bicycle.
Sentence 5: any car flew on one dog.
```

GENERATION OF RANDOM NUMBERS:
1. **Use stdlib.h (for srand function)**
2. **Use time.h (for time function).**
3. **srand(time(0)); for getting different number every time you run the program.**
4. **For getting a random number between 0 – 50: num=rand()%51;**

Example program:
```c
#include <stdio.h>
#include <stdlib.h> //for srand funtion
#include <time.h>   //for time function
int main(void)
{
    int num;

    srand(time(0)); //we use srand function to be able to get a random number
                    //but we can not use the srand function on its own we also
                    //use time function in it to give a start point to the srand function.
                    //because time is different every time you run the program,
                    //the random number will be different also
    num=rand()%100; //because time returns a very big number because
                    //it returns the milisecond value of the hour, so we want to get a random number
                    //between 0 and 99, we get the modulus 100 of the rand function

    printf("The random number is: %d", num);
    return(0);

}
```

Example Run#1:   //the output will be different in each run...
```
The random number is: 99
```

Example Run#2:
```
The random number is: 26
```

2. Antares Shopping Mall organized a lottary for their customers. The customers filled out coupons writing their **name, the shopping date** and **the name of the store** that they made the shopping. The list of award winning customers are stored in the **customers.txt**.

Write a C program that gets customer information from the file named **customers.txt**, which are *name*, *date* and *store_name*, each seperated by **--** characters as shown in the file below. Then the program creates a report to announce the customer list in the following format:

- *Date* without the year information. For example; when the date info is "**29/01/2010**", program displays "**29/01**".

- *Name and surname column*, if the totalsize of the name and the surname is greater than **12**, then the program displays "the first letter of the first name + dot + surname".
  For example;
    o if the name is **Ahmet Ali Cinar,** it will be shown as **A.Ali Cinar** in the coupon.
    o if the name is **Mert Lacinkaya**, it will be shown as **M.Lacinkaya** in the coupon.
- *Name of the Store*.

Create the given report format for the given file as in the example run.

customers.txt

```
Yusuf Sevki Gunaydin--11/02/2018--MARKS AND SPENCER
Mert Lacinkaya--24/02/2018--VAKKO
Elif Gul--13/05/2017--TEKIN ACAR
Hatice Cataloluk--12/07/2017--SIEMENS
Attila Sengul--15/06/2017--OFFICE 1 SUPERSTORE
Yusuf Evren Aykac--12/01/2018--GLORIA JEAN'S COFFEES
```

Example Run:

```
AWARD WINNING CUSTOMERS
---------------------------------------------
11/02 Y.Sevki Gunaydin     MARKS AND SPENCER
24/02 M.Lacinkaya          VAKKO
13/05 E.Gul                TEKIN ACAR
12/07 H.Cataloluk          SIEMENS
15/06 A.Sengul             OFFICE 1 SUPERSTORE
12/01 Y.Evren Aykac        GLORIA JEAN'S COFFEES
```