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III - Year
ECE
22/8/2021

ASSESSMENT - 1

1) Find the output of the program.

```
#include <stdio.h>
int fun();
int main(){
    foo(fun(); fun(); fun()){
        printf("%d ", fun());
    }
    return 0;
}
int fun(){
    static int num = 10;
    return num--;
}
```

output

852

2)

1) what is the 16 bit compiler allowable range for integer constants.

d) -32768 to 32767

2) what is the output of statement "printf("%d", (a++))"?

b) The current value of a.

3. In the c language, the constant is defined

c) Anywhere, but starting on a new line.

4) loop construct that will always be executed atleat once?

d) do while.

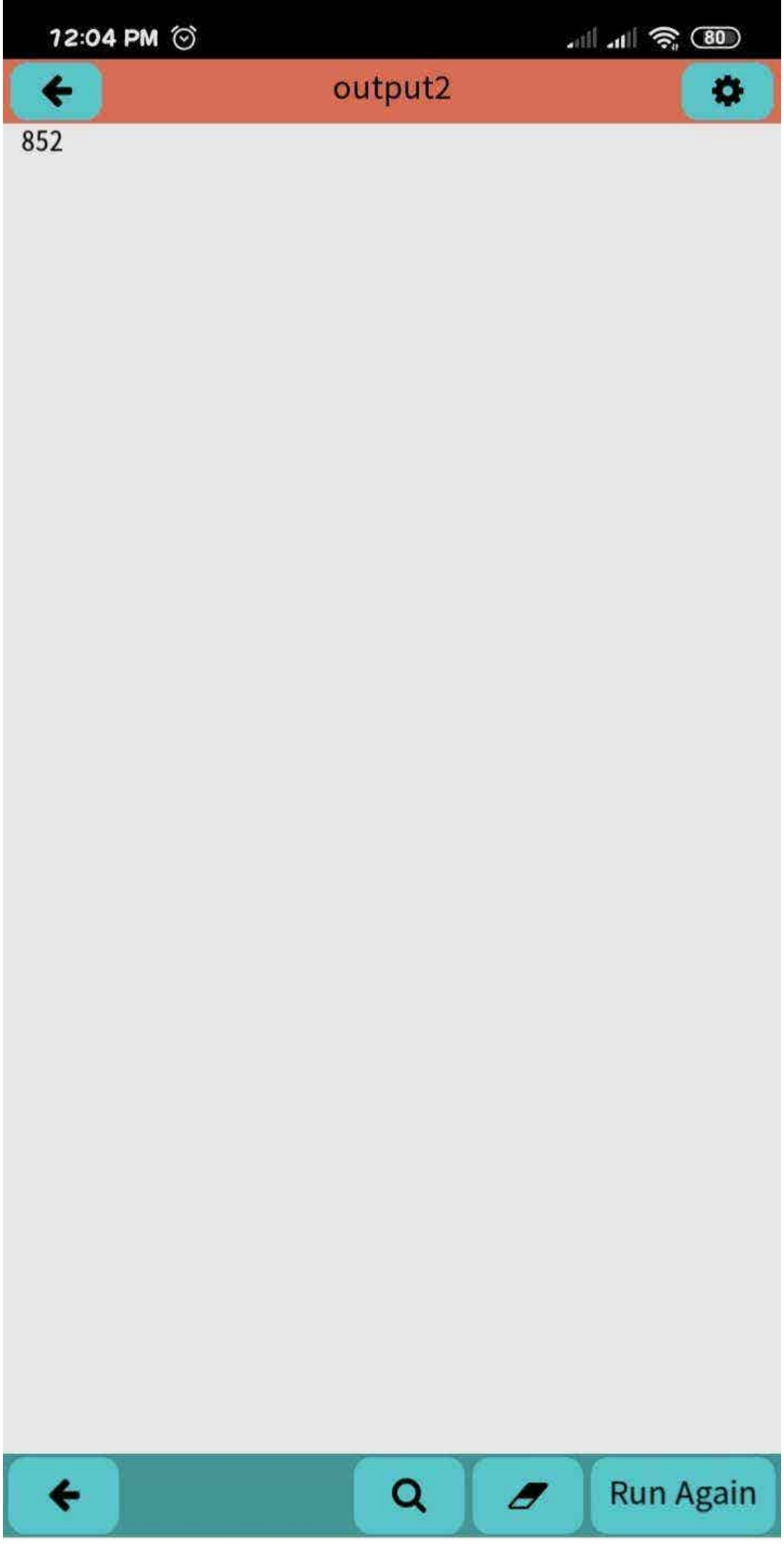
5) Array is a — data structure

c) linear.

output2.c

```c
#include <stdio.h>
int fun();
int main()
{
    for (fun();fun();fun())
    {
        printf("%d",fun());
    }
    return 0;
}
int fun()
{
    static int num=10;
    return num--;
}
```

Run


12:04 PM
80
output2
852
Run Again

A)

```
#include <stdio.h>
int main()
{
    int n, i, j;
    printf("Enter the no. of rows: ");
    scanf("%d", &n);
    for(i=1; i<=n; i++)
    {
        for(j=1; j<=2*n-1; j++)
        {
            if(j>=n-(i-1) && j<=n+(i-1))
            {
                printf("*");
            }
            else
                printf(" ");
            }
            printf("\n");
    }
    return 0;
}
```

output

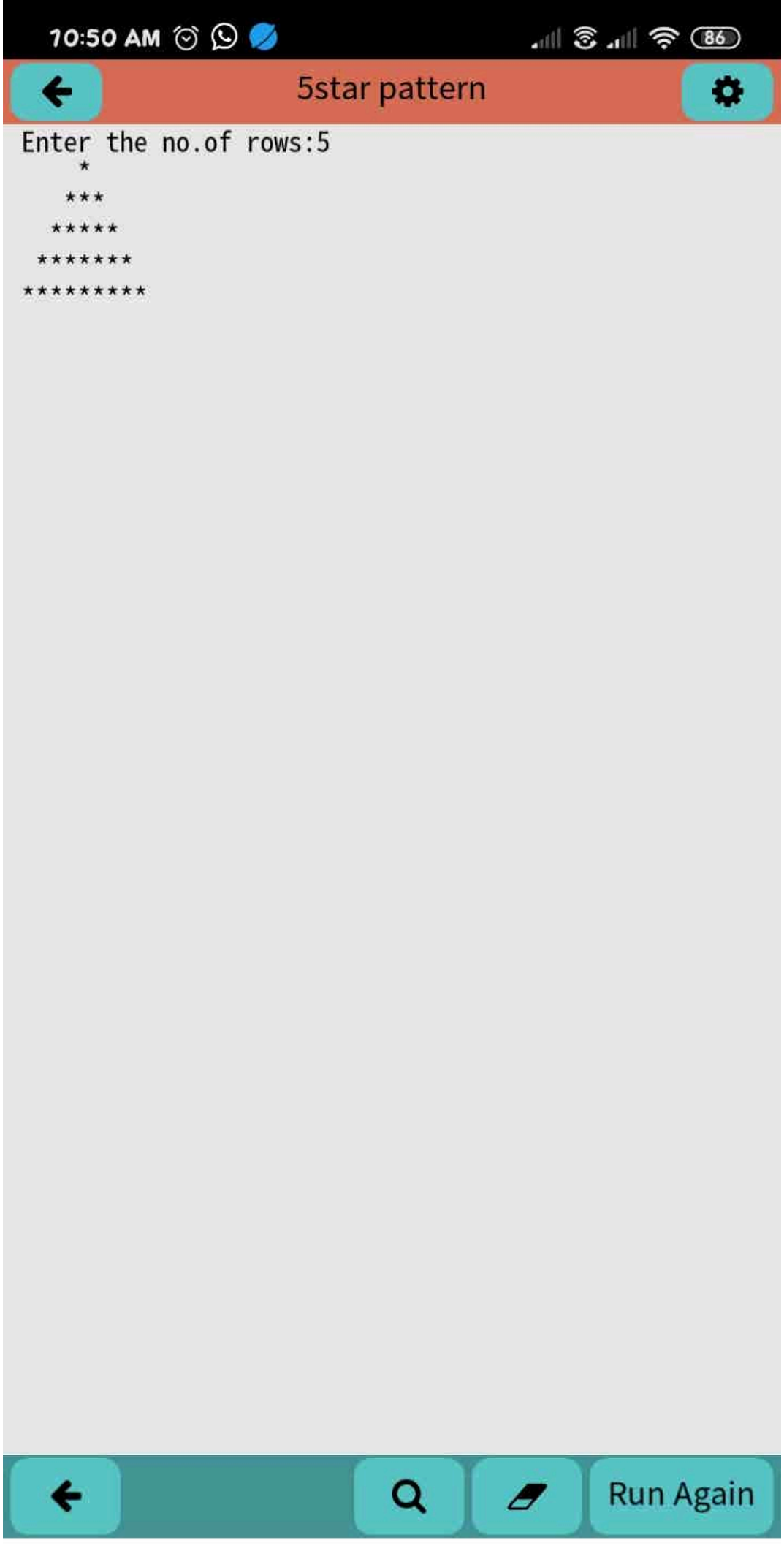
```
Enter the no. of rows: 5
        *
      * * *
    * * * * *
  * * * * * * *
* * * * * * * * *
```

5star pattern.c

```c
#include <stdio.h>
int main()
{
    int n,i,j;
    printf("Enter the no.of rows:");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        for(j=1;j<=2*n-1;j++)
        {
         if(j>=n-(i-1)&&j<=n+(i-1))
         {
            printf("*");
         }
        else
            printf(" ");
         }
        printf("\n");
    }
    return 0;
}

```

Run


10:50 AM
86
5star pattern
Enter the no.of rows:5
*
***
*****
****
****
Run Again

5) Given the array consisting of alphabets and digits, find the frequency of each digit / alphabet in the given string.

Program:

```
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
int main()
{
    char ar[1001], i;
    int j, count;
    scanf("%s", ar);
    for(i=48; i<=57; i++){
    count=0;
      for(j=0; j<strlen(ar); j++){
        if(ar[j]==i)
        count++;
        }
        printf("%d", count);
    }
    return 0;
}
```

Output:

```
a11478056b
02101111100
```

output3.c

```c
#include <stdlib.h>
int main()
{
    char ar[1001],i;
    int j,count;
    scanf("%s",ar);
    for(i=48;i<=57;i++){
     count=0;
        for(j=0;j<strlen(ar);j++){
            if(ar[j]==i)
             count++;
            }
            printf("%d",count);
    }
    return 0;
}
```

Run