

Lecture 2

Compute processing time taken by program

Arrays- Traversing, Searching, Updating

```
//Program to calculate the time taken to add two numbers program.  
//Note: If user gives input slowly that time also add up for total execution time.  
#include <stdio.h>  
#include <time.h>  
int main(void)  
{  
time_t start, end;  
start = time(NULL);  
int a, b;  
scanf("%d %d", &a, &b);  
printf("Sum of %d and %d is %d\n", a, b, a + b);  
end = time(NULL);  
printf("Time taken to print sum is %.2f seconds", difftime(end, start));  
}
```

The following example shows the usage of rand() function

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <time.h>
```

```
int main () {  int i, n;
```

```
    time_t t; //t variable of type time_t
```

```
n = 5;
```

```
    /* Intializes random number generator */
```

```
    srand((unsigned) time(&t));
```

```
    /* Print 5 random numbers from 0 to 49 */
```

```
    for( i = 0 ; i < n ; i++ )
```

```
    {    printf("%d\n", rand() % 50); }
```

```
    return(0);
```

```
}
```

To Do

- Write program to read total marks of 30 students. Your program must check if any student scored 35, 40, 50, 60, 70, 80 or 90 marks. If yes, give such students grace mark of 1 to award them next grade. Award grade to each student and print following:
 - 1) No of students who failed and passed the exam
 - 2) No. of students in each grade category
- Write program to read name of student. Convert and display the name in uppercase.