Experiment 3

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

int main() {
   int pid,pid1,pid2;
   pid=fork();
   if(pid==-1){
      printf("ERROR IN PROCESS CREATION \n");
      exit(1);
   }
   if(pid!=0){
      pid1=getpid();
      printf("\n the parent process ID is %d\n",pid1);
   }
   else{
      pid2=getpid();
      printf("\n the child process ID is %d\n",pid2);
   }
   return 0;
}
```

Output

```
the parent process ID is 29314

the child process ID is 29317
```

Experiment 4

```
#include<iostream>
using namespace std;
void findWaitingTime(int processes[], int n,
                          int bt[], int wt[])
{
    wt[0] = 0;
    for (int  i = 1; i < n ; i++ )
        wt[i] =  bt[i-1] + wt[i-1] ;
}
void findTurnAroundTime( int processes[], int n,
                  int bt[], int wt[], int tat[])
{
    for (int  i = 0; i < n ; i++)
        tat[i] = bt[i] + wt[i];
}
void findavgTime( int processes[], int n, int bt[])
{
    int wt[n], tat[n], total_wt = 0, total_tat = 0;
    findWaitingTime(processes, n, bt, wt);

    findTurnAroundTime(processes, n, bt, wt, tat);
    cout << "Processes  "<< " Burst time  "
         << " Waiting time  " << " Turn around time\n";

    for (int  i=0; i<n; i++)
    {
        total_wt = total_wt + wt[i];
        total_tat = total_tat + tat[i];
        cout << "   " << i+1 << "\t\t" << bt[i] <<"\t    "
            << wt[i] <<"\t\t  " << tat[i] <<endl;
    }

    cout << "Average waiting time = "
         << (float)total_wt / (float)n;
    cout << "\nAverage turn around time = "
         << (float)total_tat / (float)n;
}
```

```
int main()
{
    int processes[] = { 1, 2, 3, 4, 5};
    int n = sizeof processes / sizeof processes[0];

    int  burst_time[] = {12, 15, 2, 6, 4};

    findavgTime(processes, n,  burst_time);
    return 0;
}
```

Output

```
PS C:\Users\Acer\OneDrive\Documents\VS c> cd "c:\Users\Acer\OneDrive\Documents\VS c\" ; if ($?) { g++ v.cpp -o v } ; if ($?) { .\v }
Processes   Burst time   Waiting time   Turn around time
   1           12          0            12
   2           15          12           27
   3           2           27           29
   4           6           29           35
   5           4           35           39
Average waiting time = 20.6
Average turn around time = 28.4
```