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COURSE : Operating Systems

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CODE :

FILE7.C

```
#include<stdio.h>
int main()
{
    int bt[20],p[20],wt[20],tat[20],i,j,n,total=0,pos,temp;
    float avg_wt,avg_tat;
    printf("Enter the number of process :");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("p%d:",i+1);
        scanf("%d",&bt[i]);
        p[i]=i+1;
    }
    for(i=0;i<n;i++)
    {
        pos=i;
        for(j=i+1;j<n;j++)
        {
            if(bt[j]<bt[pos])
                pos=j;
        }
        temp=bt[i];
        bt[i]=bt[pos];
        bt[pos]=temp;
        temp=p[i];
        p[i]=p[pos];
        p[pos]=temp;
    }
    wt[0]=0;
    for(i=0;i<n;i++);
    {
        wt[i]=0;
        for(j=0;j<i;j++)
```

```

wt[i]+=bt[j];
total+=wt[i];
}
avg_wt=(float)total/n;
total=0;
printf("\nProcess\t Burst Time\tWaiting Time \t Turnaround Time");
for(i=0;i<n;i++)
{
tat[i]=bt[i]+wt[i];
total+=tat[i];
printf("\np%d\t\t %d\t\t %d\t\t %d", p[i],bt[i],wt[i],tat[i]);
}
avg_tat=(float)total/n;
printf("\n\nAverage Waiting Time=%f",avg_wt);
printf("\nAverage Turnaround Time=%f\n",avg_tat);
}

```

FIL8.C

```

#include<stdio.h>
void main()
{
int i,j,n,bt[10],p[10],compt[1],wt[10],tat[10],temp1,temp2;
float sumwt=0.0,sumtat=0.0,avgwt,avgtat;
printf("Enter the number of processes : ");
scanf("%d",&n);
printf("Enter the burst time of %d process\n",n);
for(i=0;i<n;i++)
scanf("%d",&bt[i]);
printf("Enter the priority of %d process\n",n);
for(i=0;i<n;i++)
scanf("%d",&p[i]);
for(i=0;i<n;i++)
for(j=i+1;j<n;j++)
if(p[i]>p[j])
{
temp1=bt[i];
bt[i]=bt[j];
bt[j]=temp1;
temp2=p[i];
p[i]=p[j];
p[j]=temp2;
}
compt[0]=bt[0];
wt[0]=0;
for(i=1;i<n;i++)
compt[i]=bt[i]+compt[i-1];
for(i=0;i<n;i++)
tat[i]=compt[i];
wt[i]=tat[i]-bt[i];
sumtat+=tat[i];
sumwt+=wt[i];
}

```

```

avgwt=sumwt/n;
avgtat=sumtat/n;
printf("-----\n");
printf("Bt\tCt\tTat\tWt\n");
printf("-----\n");
for(i=0;i<n;i++)
{
printf("%2d\t%2d\t%2d\t%2d\n");
compt[i],tat[i],wt[i])
}
printf("-----\n");
printf(" Avgwt = %.2f\tAvgtat = %.2f\n",avgwt,avgtat);
printf("-----\n");
}

```

MUL.JAVA

```

import java.lang.*;
import java.util.*;

```

```

class A1 extends Thread
{
int i,j;
A1(int x, int y)
{
i=x;
j=y;
}
public void run()
{
System.out.println("Thread A::ARITHMATIC OPERATIONS");
System.out.println("SUM" +(i+j));
System.out.println("DIFFERNCE " +(i-j));
System.out.println("PRODUCT " +(i*j));
System.out.println("RATIO " +(i/j));
System.out.println("POWER "+Math.pow(i,j));
System.out.println("END of A");
}
}

class B1 extends Thread
{
int i;
B1(int x)
{
i=x;
}
public void run()
{
System.out.println("THREAD B :: TRIGNOMETIC OPERATIONS");
System.out.println("SINE OF "+i+" "+Math.sin(i));
System.out.println("COSINE OF "+i+" "+Math.cos(i));
System.out.println("TAN OF "+i+" "+Math.tan(i));
}
}

```

```
System.out.println("SQUARE ROOT OF "+i+" "+Math.sqrt(i));  
System.out.println(" END OF B");
```

```
}  
}
```

```
class mul
```

```
{  
public static void main(String args[])  
{  
Scanner s= new Scanner(System.in);  
System.out.println("ENTER TWO VALUES FOR ARITHMETIC OPERATIONS");  
int x=s.nextInt();  
int y=s.nextInt();  
System.out.println("ENTER A VALUE FOR TRIGNOMETIRC OPERATIONS");  
int z=s.nextInt();  
A1 a=new A1(x,y);  
B1 b=new B1(z);  
a.start();  
b.start();  
}  
}
```

SCREENSHOTS:

The image shows two screenshots. The top screenshot is a code editor displaying a C program named `test.c`. The program calculates the average of numbers entered by the user. It uses arrays for storing numbers, a loop for input, and another loop for calculating the average. The bottom screenshot is a terminal window showing the compilation of `test.c` using `gcc`. The output shows several warnings and errors, including undeclared identifiers, format string mismatches, and expected declarations or statements at the end of input.

```
#include<stdio.h>
int main()
{
    int ht[20],p[20],wt[20],tat[20],t,n,total=0;sum,temp;
    float avg_wt,avg_tat;
    printf("Enter the number of process :");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("pid:-",t+1);
        scanf("%d",&ht[i]);
        p[i]=t+1;
    }
    for(i=0;i<n;i++)
    {
        pos=i;
        for(j=i+1;j<n;j++)
        {
            if(ht[j]<ht[pos])
            {
                pos=j;
            }
        }
        temp=ht[i];
        ht[i]=ht[pos];
        ht[pos]=temp;
        temp=p[i];
        p[i]=p[pos];
        p[pos]=temp;
    }
    wt[i]=0;
    for(i=0;i<n;i++)
    {
        wt[i]=0;
        for(j=0;j<n;j++)
        {
            wt[i]=wt[i]+wt[j];
        }
        avg_wt=(float)total/n;
        total=0;
        printf("\nProcess\tBarut Time\tWaiting Time\tTurnaround Time");
        for(i=0;i<n;i++)
        {
            tat[i]=wt[i]+wt[i];
            total=tat[i];
        }
    }
}
```

```
test.c:14:14: warning: format '%d' expects a matching 'int' argument [-Wformat]
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
               ^~~~~~
test.c:15:12: error: 'wt' undeclared (first use in this function)
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
               ^
test.c:15:12: note: each undeclared identifier is reported only once for each function it appears in
test.c:15:44: error: expected expression before '[' token
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                                           ^
test.c:15:52: error: 'wt' undeclared (first use in this function); did you mean 'wt'?
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                                           ^~~~~
test.c:18:28: warning: format '%d' expects a matching 'int' argument [-Wformat]
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                           ^~~~~
test.c:18:36: warning: format '%d' expects a matching 'int' argument [-Wformat]
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                           ^~~~~
test.c:18:44: error: expected declaration or statement at end of input
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                                           ^
test.c:21:14: warning: format '%d' expects a matching 'int' argument [-Wformat]
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
               ^~~~~~
test.c:22:12: error: 'wt' undeclared (first use in this function)
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
               ^
test.c:22:12: note: each undeclared identifier is reported only once for each function it appears in
test.c:22:44: error: expected expression before '[' token
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                                           ^
test.c:22:52: error: 'wt' undeclared (first use in this function); did you mean 'wt'?
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                                           ^~~~~
test.c:25:28: warning: format '%d' expects a matching 'int' argument [-Wformat]
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                           ^~~~~
test.c:25:36: warning: format '%d' expects a matching 'int' argument [-Wformat]
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                           ^~~~~
test.c:25:44: error: expected declaration or statement at end of input
    printf("%d\t\t%d\t\t%d\t\t%d", p[i],ht[i],wt[i],tat[i]);
                                           ^
```

```

printf("Enter the burst time of %d process\n",i);
for(i=0;i<n;i++)
scanf("%d",&bt[i]);
printf("Enter the priority of %d process\n",i);
for(i=0;i<n;i++)
scanf("%d",&p[i]);
for(i=0;i<n;i++)
for(j=i+1;j<n;j++)
if(p[i]>p[j])
{
temp=bt[i];
bt[i]=bt[j];
bt[j]=temp;
temp=p[i];
p[i]=p[j];
p[j]=temp;
}
comp[i]=bt[i];
wt[0]=0;
for(i=1;i<n;i++)
comp[i]=bt[i]+comp[i-1];
for(i=0;i<n;i++)
tat[i]=comp[i];
wt[i]=tat[i]-bt[i];
sumtat=tat[i];
sumwt=wt[i];
}
avgwt=sumwt/n;
avgtat=sumtat/n;
printf("-----\n");
printf("BT\tCT\tTAT\tWT\n");
printf("-----\n");
for(i=0;i<n;i++)
{
printf("%d\t%d\t%d\t%d\n",i,comp[i],tat[i],wt[i]);
comp[i],tat[i],wt[i]
}
printf("-----\n");
printf("avgwt = %.2f\tavgtat = %.2f\n",avgwt,avgtat);
printf("-----\n");
}

```

```

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printf("\n\nBT\tCT\tTAT\tWT\n", p[i],bt[i],wt[i],tat[i]);
PILV.c:108:1: error: expected declaration or statement at end of input
}
PILV-appelab3-ai-5 gcc PILV.c
PILV.c: In function 'main':
PILV.c:88:8: warning: unknown escape sequence: '\t'
printf("\n\nBT\tCT\tTAT\tWT\n", p[i],bt[i],wt[i],tat[i]);
PILV.c:108:1: error: expected expression before '}' token
printf("\n\nBT\tCT\tTAT\tWT\n", p[i],bt[i],wt[i],tat[i]);
PILV.c:108:1: warning: format '%d' expects a matching 'int' argument [-Wformat]
printf("\n\nBT\tCT\tTAT\tWT\n", p[i],bt[i],wt[i],tat[i]);
PILV.c:108:1: warning: format '%d' expects a matching 'int' argument [-Wformat]
printf("\n\nBT\tCT\tTAT\tWT\n", p[i],bt[i],wt[i],tat[i]);
PILV.c:108:1: error: expected declaration or statement at end of input
}
PILV-appelab3-ai-5 gcc PILV.c
PILV.c: In function 'main':
PILV.c:88:8: warning: unknown escape sequence: '\t'
printf("\n\nBT\tCT\tTAT\tWT\n", p[i],bt[i],wt[i],tat[i]);
PILV.c:108:1: error: expected declaration or statement at end of input
}
PILV-appelab3-ai-5 gcc PILV.c
PILV.c: In function 'main':
PILV.c:108:1: error: expected declaration or statement at end of input
}
PILV-appelab3-ai-5 gcc PILV.c
PILV-appelab3-ai-5 ./a.out
Enter the number of process is
5
5
5
5
5
5
Process Burst Time Waiting Time Turnaround Time
p1 5 0 5
p2 3 0 3
p3 4 0 4
p4 1 0 1
p5 0 -3 0
Average Waiting Time=1.000000
Average Turnaround Time=1.000000
PILV-appelab3-ai-5 cat > PILV.c
PILV-appelab3-ai-5

```

```
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Untitled Document 1

//...
#include <stdio.h>
void main()
{
    int i,j,n,ht[10],p[10],compt[1],wt[10],tat[10],temp1,temp2;
    float sumwt=0.0,sumtat=0.0,avgwt,avgtat;
    printf("Enter the number of processes : ");
    scanf("%d",&n);
    printf("Enter the burst time of nd process\n",n);
    for(i=0;i<n;i++)
        scanf("%d",&ht[i]);
    printf("Enter the priority of nd process\n",n);
    for(i=0;i<n;i++)
        scanf("%d",&p[i]);
    for(j=i+1;j<n;j++)
        if(p[i]>p[j])
        {
            temp1=ht[i];
            ht[i]=ht[j];
            ht[j]=temp1;
            temp2=p[i];
            p[i]=p[j];
            p[j]=temp2;
        }
    compt[0]=ht[0];
    wt[0]=0;
    for(i=1;i<n;i++)
        compt[i]=ht[i]+compt[i-1];
    for(i=0;i<n;i++)
        tat[i]=compt[i];
    wt[i]=tat[i]-ht[i];
    sumwt=sumwt+wt[i];
    sumtat=sumtat+tat[i];
    avgwt=sumwt/n;
    avgtat=sumtat/n;
    printf("-----\n");
    printf("BT,CT,TAT,WT\n");
    printf("-----\n");
    for(i=0;i<n;i++)
    {
        printf("nd,ct,wt,tat,wt\n");
        compt[i],tat[i],wt[i]
    }
}

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Untitled Document 1

scanf("%d",&ht[i]);
p[i]=i+1;
for(i=0;i<n;i++)
{
    pos=i;
    for(j=i+1;j<n;j++)
    {
        if(ht[j]<ht[pos])
            pos=j;
    }
    temp=ht[i];
    ht[i]=ht[pos];
    ht[pos]=temp;
    temp=p[i];
    p[i]=p[pos];
    p[pos]=temp;
}
wt[0]=0;
for(i=0;i<n;i++)
{
    wt[i]=0;
    for(j=0;j<i;j++)
        wt[i]=wt[j];
    total=sumwt+wt[i];
}
avg_wt=(float)total/n;
total=0;
printf("\nProcess\t Burst Time\tWaiting Time \t Turnaround Time");
for(i=0;i<n;i++)
{
    tat[i]=ht[i]+wt[i];
    total=tat[i];
    printf("\nnd\t\t: %d\t\t: %d\t\t: %d\t\t: %d", p[i],ht[i],wt[i],tat[i]);
}
avg_tat=(float)total/n;
printf("\nAverage Waiting Time=%f",avg_wt);
printf("\nAverage Turnaround Time=%f",avg_tat);
}

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```

```
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ml-java:14: error: class, interface, or enum expected
if (new $i(x))
^
ml-java:15: error: class, interface, or enum expected
a.start();
^
ml-java:16: error: class, interface, or enum expected
b.start();
^
ml-java:17: error: class, interface, or enum expected
c
^
3 errors
ml-java:18:14-15 java: ml.java
ml-java:1: error: cannot find symbol
class A1 extends Thread
^
symbol: class Thread
ml-java:17: error: package Sysio does not exist
Sysio.out.println("PRODUCT " + c(i*j));
^
ml-java:15: error: cannot find symbol
a.start();
^
symbol: method start()
Location: variable a of type A1
3 errors
ml-java:16:14-15 java: ml.java
ml-java:17: error: package Sysio does not exist
Sysio.out.println("PRODUCT " + c(i*j));
^
1 error
ml-java:18:14-15 java: ml.java
ml-java:18:14-15 ml.java
ml-java:18: command not found
ml-java:18:14-15 java ml
ENTER AND VALUES FOR ARITHMETIC OPERATIONS
3 4
ENTER A VALUE FOR TRIGONOMETRIC OPERATIONS
2 3
THROW AN ARITHMETIC OPERATIONS
THROW AN TRIGONOMETRIC OPERATIONS
SMALL
DIFFERENCE -1
PRODUCT 39
RATIO 8
LINE OF 28.888874282288817
POWER 11221.8
END OF A
LOGTIME OF 2.8.410146835471424
TON OF 2.7.1050996326319
SQUARE ROOT OF 21.414713845718891
END OF B
ml-java:18:14-15
```