**EXPERIMENT: 05** Construct a scheduling program with C that selects the waiting process with the highest priority to execute next

**PROGRAM:**

#include <stdio.h>

int main() {

int n, i, j, bt[20], pr[20], p[20], wt[20], tat[20];

float avg\_wt = 0, avg\_tat = 0;

printf("Enter number of processes: ");

scanf("%d", &n);

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

printf("P%d Burst Time: ", i + 1);

scanf("%d", &bt[i]);

printf("P%d Priority: ", i + 1);

scanf("%d", &pr[i]);

p[i] = i + 1;

}

// sort by priority (smaller = higher)

for (i = 0; i < n - 1; i++) {

for (j = i + 1; j < n; j++) {

if (pr[i] > pr[j]) {

int t = pr[i]; pr[i] = pr[j]; pr[j] = t;

t = bt[i]; bt[i] = bt[j]; bt[j] = t;

t = p[i]; p[i] = p[j]; p[j] = t;

}

}

}

wt[0] = 0;

for (i = 1; i < n; i++) wt[i] = wt[i-1] + bt[i-1];

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

tat[i] = wt[i] + bt[i];

avg\_wt += wt[i];

avg\_tat += tat[i];

}

printf("\nP\tBT\tPr\tWT\tTAT\n");

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

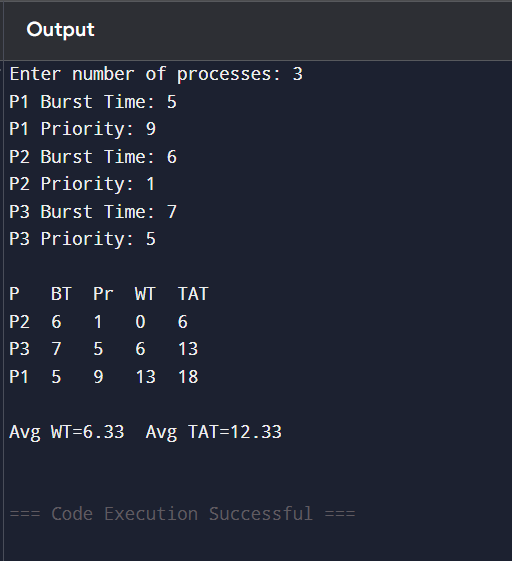
printf("P%d\t%d\t%d\t%d\t%d\n", p[i], bt[i], pr[i], wt[i], tat[i]);

printf("\nAvg WT=%.2f Avg TAT=%.2f\n", avg\_wt/n, avg\_tat/n);

return 0;

}

**OUTPUT:**

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