**Q.) Write a program to implement "Shortest Job First" Scheduling Algorithm.**

Ans.)

#!/usr/bin/env python

from sys import exit

def main():

process\_que = []

burst\_time = []

waiting\_time = []

turn\_around = []

total\_processes = input("Enter Total Number of Processes : ")

if total\_processes == 0:

print("You need to enter at least 1 process to Schedule.")

exit()

elif total\_processes != 0:

for i in range(int(total\_processes)):

process\_que.append(input("Enter Process Name : "))

burst\_time.append(input("Enter Process Burst Time : "))

keydict = dict(zip(process\_que, burst\_time))

process\_que.sort(key=keydict.get)

burst\_time.sort()

for i in range(int(total\_processes)):

if i == 0:

waiting\_time.insert(0, 0)

waitingCalculator = int(burst\_time[i]) + int(waiting\_time[i])

waiting\_time.insert(i + 1, waitingCalculator)

turnaroundCalculator = int(burst\_time[i]) + int(waiting\_time[i])

turn\_around.insert(i, turnaroundCalculator)

waiting\_time.pop()

print("Process Name\t| Burst Time\t| Waiting Time\t| Turn Around Time")

print('-' \* 60)

for x, y, z, k in zip(process\_que, burst\_time, waiting\_time, turn\_around):

print(str(x) + ' \t\t\t\t|', str(y) + ' \t\t\t|', str(z) + ' \t\t\t|', str(k))

print('\n');

print('-' \* 60)

print("Average Waiting Time : %s" % (sum(waiting\_time) / len(waiting\_time)))

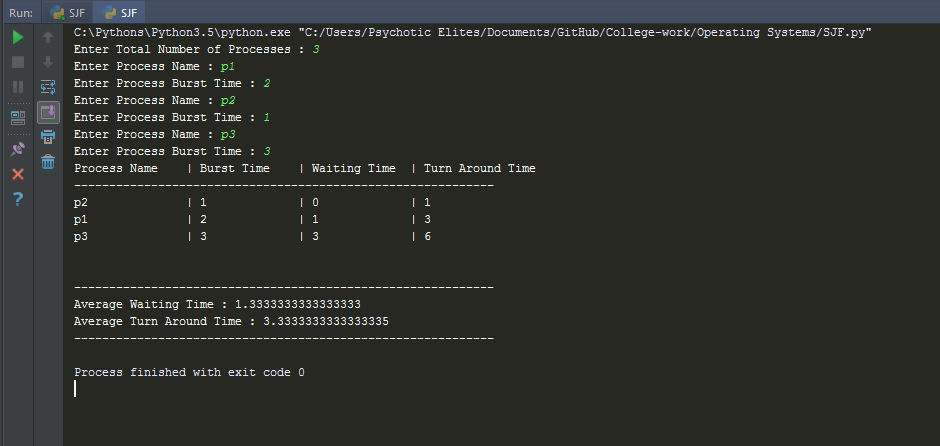
print("Average Turn Around Time : %s" % (sum(turn\_around) / len(turn\_around)))

print('-' \* 60)

if \_\_name\_\_ == '\_\_main\_\_':

main()

**Output :**



**Shortest Job First Scheduling**