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**NPTEL** (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **The Joy of Computing using Python (course)**

Announcements (announcements)

**About the Course** ([https://swayam.gov.in/nd1\\_noc20\\_cs35/preview](https://swayam.gov.in/nd1_noc20_cs35/preview)) Ask a Question (forum)

Progress (student/home) Mentor (student/mentor)

# Programming Assignment-1: Cab and walk

**Due on 2020-03-05, 23:59 IST**

## Course outline

### How does an NPTEL online course work?

#### Week 0

#### Week 1

#### Week 2

#### Week 3

#### week 4

#### Week 5

- ☒ Introduction to Dictionaries (unit? unit=84&lesson=85)
- ☐ Speech to Text : No need to write 01 (unit? unit=84&lesson=86)
- ☒ Speech to Text : No need to write 02 (unit? unit=84&lesson=87)

- ☒ Speech to Text : No need to write 03 (unit? unit=84&lesson=88)
- ☐ Monte Hall : 3 doors and a twist 01 (unit? unit=84&lesson=89)
- ☐ Monte Hall : 3 doors and a twist 02 (unit? unit=84&lesson=90)
- ☐ Rock, Paper and Scissor : Cheating not allowed !! 01 (unit? unit=84&lesson=91)
- ☐ Rock, Paper and Scissor : Cheating not allowed !! 02 (unit? unit=84&lesson=92)
- ☐ Rock, Paper and Scissor : Cheating not allowed !! 03 (unit? unit=84&lesson=93)
- ☐ Rock, Paper and Scissor : Cheating not allowed !! 04 (unit? unit=84&lesson=94)
- ☐ Sorting and Searching : 20 questions game 01 (unit? unit=84&lesson=95)
- ☐ Sorting and Searching : 20 questions game 02 (unit? unit=84&lesson=96)
- ☐ Sorting and Searching : 20 questions game 03 (unit? unit=84&lesson=97)
- ☐ Sorting and Searching : 20

Arun is working in an office which is  $N$  blocks away from his house. He wants to minimize the time it takes him to go from his house to the office.

He can either take the office cab or he can walk to the office.

Arun's velocity is  $V_1$  m/s when he is walking. The cab moves with velocity  $V_2$  m/s but whenever he calls for the cab, it always starts from the office, covers  $N$  blocks, collects Arun and goes back to the office.

The cab crosses a total distance of  $N$  meters when going from office to Arun's house and vice versa, whereas Arun covers a distance of  $\sqrt{2} * N$  while walking.

Help Arun to find whether he should walk or take a cab to minimize the time.

### Input Format:

A single line containing three integer numbers  $N$ ,  $V_1$ , and  $V_2$  separated by a space.

### Output Format:

Print 'Walk' or 'Cab' accordingly

### Constraints:

$$1 \leq V_1, V_2 \leq 100$$

$$1 \leq N \leq 200$$

### Example-1:

Input:

5 10 15

Output:

Cab

### Example-2:

Input:

2 10 14

Output:

Walk

### Sample Test Cases

	Input	Output
Test Case 1	100 40 60	Cab
Test Case 2	200 50 80	Cab
Test Case 3	100 50 50	Walk
Test Case 4	2 10 14	Walk
Test Case 5	7 14 10	Walk

questions game 04 (unit? unit=84&lesson=98)	Test Case 6	10 5 5	Walk
<input type="radio"/> Sorting and Searching : 20 questions game 05 (unit? unit=84&lesson=99)	The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Sample solutions (Provided by instructor)		
<input type="radio"/> Sorting and Searching : 20 questions game 06 (unit? unit=84&lesson=100)	<pre> 1  """ 2 3  @author: descentis 4  http://sccilabs.org/amit_verma.html 5  """ 6 7  n,v1,v2 = input().split() 8 9  n = int(n) 10 v1 = int(v1) 11 v2 = int(v2) 12 13 st_d = pow(2,1/2)*n 14 st_t = st_d/v1 15 16 el_d = 2*n 17 el_t = el_d/v2 18 19 if(st_t&lt;el_t): 20     print("Walk") 21 else: 22     print("Cab") 23 </pre>		
<input type="radio"/> Sorting and Searching : 20 questions game 07 (unit? unit=84&lesson=101)			
<input type="radio"/> Sorting and Searching : 20 questions game 08 (unit? unit=84&lesson=102)			
<input type="radio"/> Quiz : Assignment 5 (assessment? name=264)			
<input type="radio"/> <b>Programming Assignment- 1: Cab and walk (/noc20_cs35/progassignment? name=291)</b>			
<input type="radio"/> Programming Assignment-2: End-Sort (/noc20_cs35/progassignment? name=292)			
<input type="radio"/> Programming Assignment-3: Semi Primes (/noc20_cs35/progassignment? name=293)			
<input type="radio"/> Week 5 Feedback (unit? unit=84&lesson=294)			
<b>Week 6</b>			
<b>Week 7</b>			
<b>Week 8</b>			

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**Week 9**

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**Week 10**

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**Week 11**

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**Week 12**

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