# Investigate the linear search algorithm

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| 1  2  3  4  5  6  7  8  9 | def linear\_search(target,items):  length\_of\_list = len(items)  for i in range(length\_of\_list):  if items[i] == target:  return i  return -1  items=[17, 2, 5, 21, 32, 18, 13, 7, 11, 8]  target=32  print(linear\_search(target,items)) |

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| 1. Identify the variables | length\_of\_list, i, target |
| 1. Explain what the function len()is doing | Getting the length of the list items |
| 1. What is the value of length\_of\_list? | 10 |
| 1. Explain what the function len()is doing | Getting the length of the list items |
| 1. What does def do? | Defines a function |
| 1. How many parameters does the function linear\_search take? | 2 |
| 1. What type of data structure is items? | list |
| 1. What datatype is target? | integer |
| 1. What are the parameters to linear\_search? | target and items |
| 1. What is the FOR loop doing? | Goes through each item in the list |
| 1. What does the IF statement do? | For each value in the list it compares it with the target value. If they are the same the index position is returned. |
| 1. What line are we calling the user defined function on? | 9 |
| 1. What is happening on line 6? What does this mean? | If the target value does not occur in the list then a value of -1 is returned |
| 1. Overall what is the code doing? | Identifying the position in the list of a terget item by comparing the value |