

[8 MARKS]

Below is a Python module that runs without error:

```
from typing import List

def magic(stuff: List[List[int]], item: str) -> str:
    item = item[3:]
    stuff[0].append(33)
    stuff[1] = 'what?'
    stuff = item
    return item

if __name__ == '__main__':
    item = 'Gilbert'
    stuff = [[5], [1, 2]]
    magic(stuff, item)
    print('bye!')
```

Draw a memory model diagram that shows the state of memory at the moment when we have reached the print statement but not yet executed it. Do not erase any stack frames that have been popped; just put a line through them. Do not erase any objects that may no longer be referenced; just leave them.

You must either draw your answer by hand (on paper or on a tablet device) or using a word processor/drawing software (like Microsoft Word, LaTeX, or Microsoft Paint).

Scan your drawing or take a photograph of it, and submit it to MarkUs in a file called Q2_solution.*extension*, where *extension* is pdf, png, HEIC, or whatever format your phone or scanner produces.