Lectures on Control Flow in Programs at Anonymous Institute
Practice Worksheet

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Instructions

- This is a practice worksheet for you to familiarise yourself with the artifacts taught during the lectures on Control Flow in Programs.
- There are three programs in this practice worksheet.
- For each program, create the following artifacts:
    1. Structural abstraction
    2. Table of Control Transfer Functions
    3. Control Flow Graph
    4. Structurally feasible executions
    5. Logically feasible executions
    6. Actual execution

Program 1

```
0
  i = read()
1
  x = i
2
  while i != 4:
3
      i = i + 1
4
      continue
5
  x = i
6
  # end
```

You could practice tracing the actual execution with the following input values:
i = 2
i = 4
i = 6

Program 2

```
0
  def func(a, b):
1
    c = a * b
2
    return c
3
  x = func(2, 3)
4
  y = read()
5
  z = func(x, y)
6
  # end
```

You could practice tracing the actual execution with the following input values:
`y = 1`
`y = -1`

Program 3

```
0
def modify(x):
1
    return x + 1
2
i = read()
3
while i < 0:
4
    i = modify(i)
5
    continue
6
# end
```

You could practice tracing the actual execution with the following input values:
`i = -2`
`i = 0`
`i = 3`