Visualization of Sampled Human-written Programs

- The images & programs are randomly sampled.
- We show images, the program semantics, and the routine relationships. The routine relationships are denoted as A->B, which mean that the output of routine A is sent to routine B. This corresponds to the *Parents* function, Line 46 in our paper.
- We also provide gt answers to the programs for reference.

Program semantics:

[1]Select(Refrigerator)

[2]Filter(White)

[3]Exist()

[4]Select(Microwave)

[5]Filter(White)

[6]Exist()

[7]Or()

Routine relationships:

[1]->[2], [2]->[3], [3]->[7], [4]->[5], [5]->[6], [6]->[7]

GT answer:

Yes

Program semantics:

[1]Select(Stove)

[2]RelateInv(Left)

[3]Filter(Refrigerator)

[4]Exist()

[5]Verify(Opened)

[6]And()

Routine relationships:

[1]->[2], [2]->[3], [3]->[4], [4]->[6], [3]->[5], [5]->[6]

GT answer:

No

Program semantics:

[1]Select(Clothing)

[2]Filter(Pink)

[3]RelateInv(Wear)

[4]Choose(Boy, Girl)

Routine relationships:

[1]->[2], [2]->[3], [3]->[4]

GT answer:

Girl

Program semantics:

[1]Select(Keyboard)

[2]Query(Material)

[3]Select(mouse)

[4]Query(Material)

[5]Same()

Routine relationships:

[1]->[2], [2]->[5], [3]->[4], [3]->[4], [4]->[5]

GT answer:

No

Program semantics:

[1]Select(Fries)

[2]Relate(Above)

[3]Filter(Tray)

[4]Query(Color)

Routine relationships:

[1]->[2], [2]->[3], [3]->[4], [4]->[5]

GT answer:

White