

Fundamentals of Computer Science TRraig Outreach Tessera, (FOCSTROT, pronounced Fox Trot) is a game designed to challenge you to explore problems and create using patterns. The product of FOCSTROT is only limited by your imagination, each level introduces a set of tools you can use to explore or create but they are by no means the only things you can do!

All you need to play FOCSTROT is a deck of cards*, any standard deck of 52 playing cards will work for playing FOCSTROT. You may find it useful to have an area to lay out the cards, but otherwise no other items are strictly necessary to have a great time!

The base game play across all levels is centered on the idea of creating instructions by placing the cards according to the guideline rules explained below.

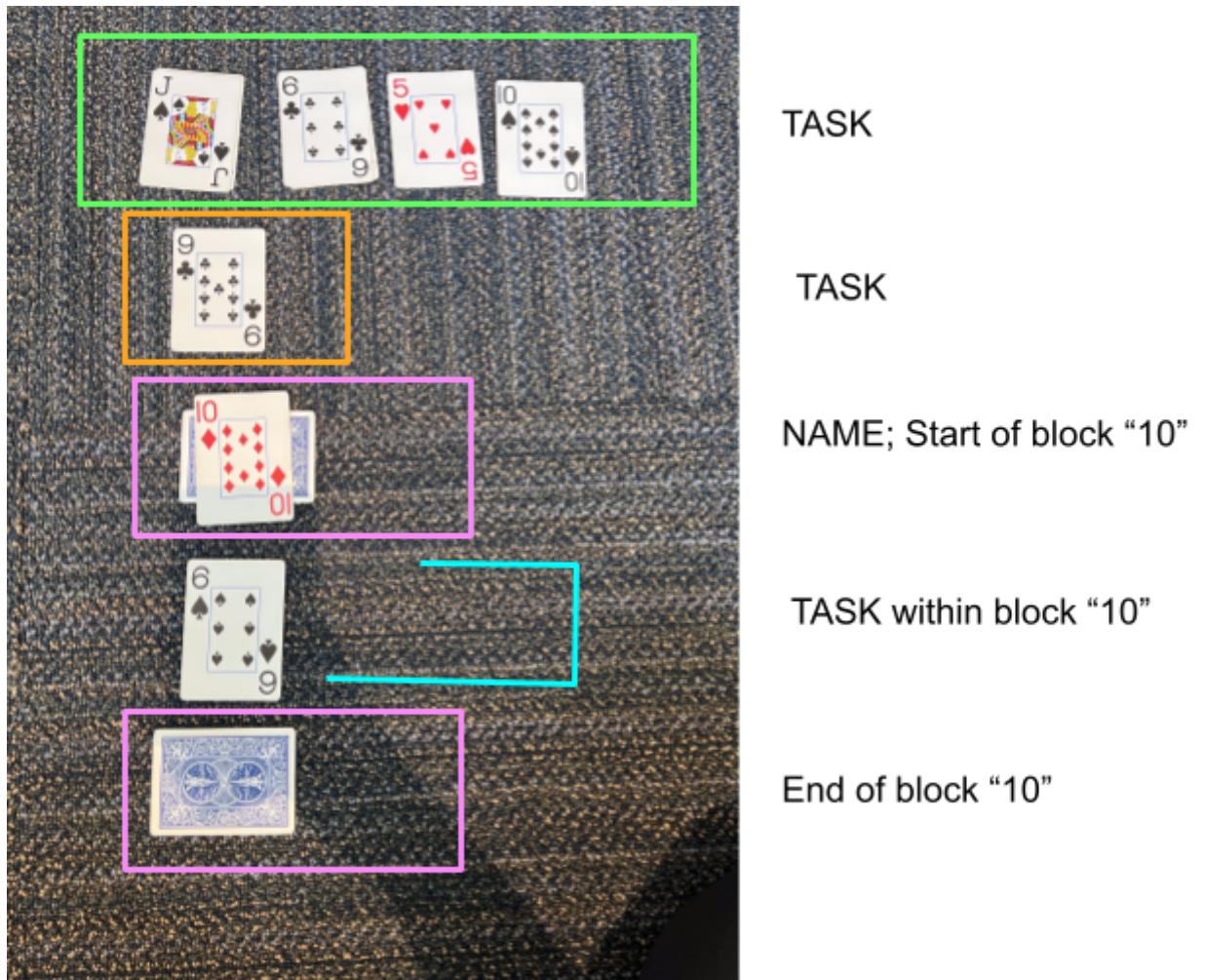
FOCSTROT can be played as a single player game, where you can either try to determine the tasks described by some of the premade card configurations provided, try to create a configuration that recreates a provided end result, or explore what you can do: try playing around with different card configurations and see what you can make or try come up with an end result you want to make and try to figure out what cards will get you there!

FOCSTROT can also be played as a multiplayer game. You can use a premade configuration or end result and try to race against the other person; one player can create a card configuration and task the other player(s) with figuring out the end result, or vice versa and one player creates an end result and the other player(s) try to figure out the card configuration that makes it. All players can also work collaboratively on the same tasks described in the single player game play above.

Across levels, here are some basic understandings for FOCSTROT:

- Cards have MEANING, this meaning might come from the suite (Spades, Clubs, Hearts, Diamonds), its value (2, Ace, King, 10, etc), or even the color of the suite (Black, Red), what each card means depends on its context (the surrounding cards) and what level you are playing.
- Cards will be read in horizontal rows called TASKS so if cards are next to each other in a horizontal line they will get meaning from being together. These horizontal lines are then read vertically from top to bottom.
- Some cards will be determined as ACTION cards in each level. The ACTIONS are what produce the final product, the ACTIONS are fully customizable *but* we will provide suggestions for two sets of actions, one where the end result will be a drawing and another where the result will be a dance/set of motions.
- In each level you might find it useful to define groups of tasks, you can do this by placing a card face down horizontally and then placing another card face up over it. The value on the card face up becomes the NAME of this block. You can refer to this block by using other cards with the same value.
- When reading level instructions, it is safe to assume that any rules in a previous level are still valid if it is not actively rewritten with new rules for that level.

- COMBO Cards are cards that derive their meaning from the specific TASK they are in and the order of the surrounding cards in that TASK, COMBO Cards are the FIRST in a TASK and denote what TASK behavior is expected



Level 1

Action Cards:

- Kings: Draw a circle or clap your hands
- Queens: Draw a triangle or stomp your feet
- Jacks: Draw a square or jump

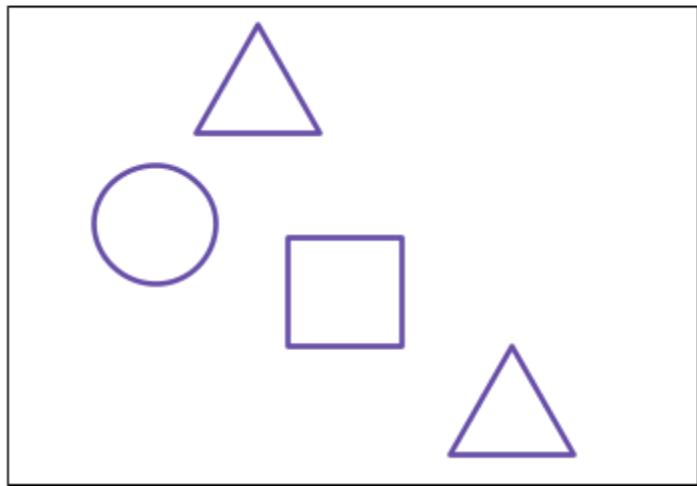
COMBO Cards:

- NAME + Number: If you define a block of ACTION cards, you can do the actions in the block multiple times by putting a NAME card (a card with the same value as the block's name) next to a number card anywhere before the block. You repeat the actions inside the block the number of times specified on the second card.



TASK; Made of 1 Action card

Potential Output



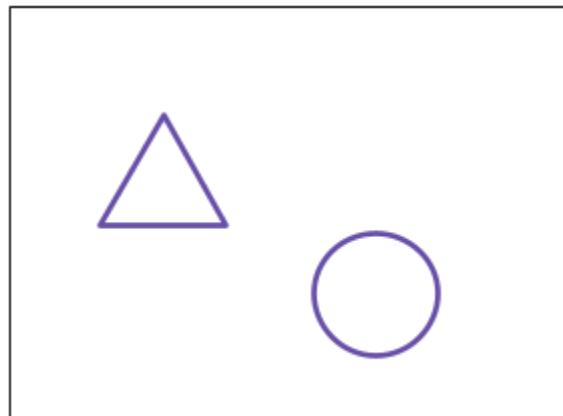


NAME block "7"; Start of block "7"

TASK; Made of 1 Action card

END Block "7"

Potential Output





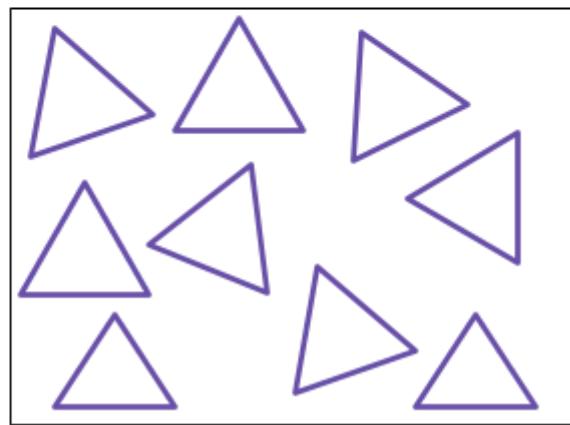
Repeat contents of Block “6”, 8 times

NAME block “6”; Start of block “6”

TASK; Made of 1 Action card

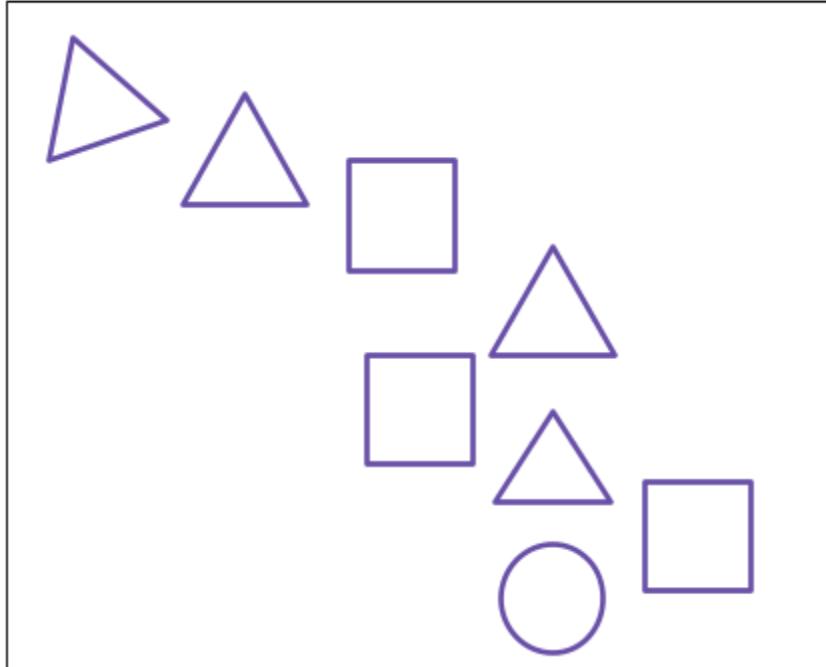
END Block “7”

Potential Output





Potential Output



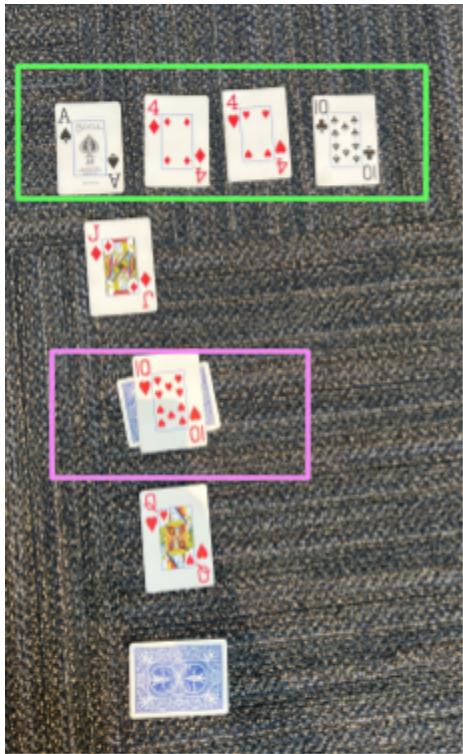
Level 2

Action Cards:

- Kings: Draw a circle or clap your hands
- Queens: Draw a triangle or stomp your feet
- Jacks: Draw a square or jump

COMBO Cards:

- NAME + Number : If you define a block of Action cards, you can do the actions in the block multiple times by putting a Label card next to a number card anywhere before the block. You repeat the actions inside the block the number of times specified on the second card.
- Aces: Aces compare the following two cards and depending on the result and suite of the Ace go to the specified NAME block (the block that corresponds to the value of the last card), which skips any other TASKs between the Ace TASK and the start of the block.
 - Spades: Equal, checks if the following two cards have the same value and if they do goes to the NAMEd block
 - Clubs: Not Equal, checks if the following two cards are different values, if they do goes to the NAMEd block
 - Hearts: Less than, checks if the first card is smaller (in value) than the second card, if it is goes to NAMEd block
 - Diamonds: Greater than, checks if the first card is larger (in value) than the second card, if it is goes to NAMEd block



ACE of Spades, check if $4 = 4$,
it does so goes to Block "10"

TASK

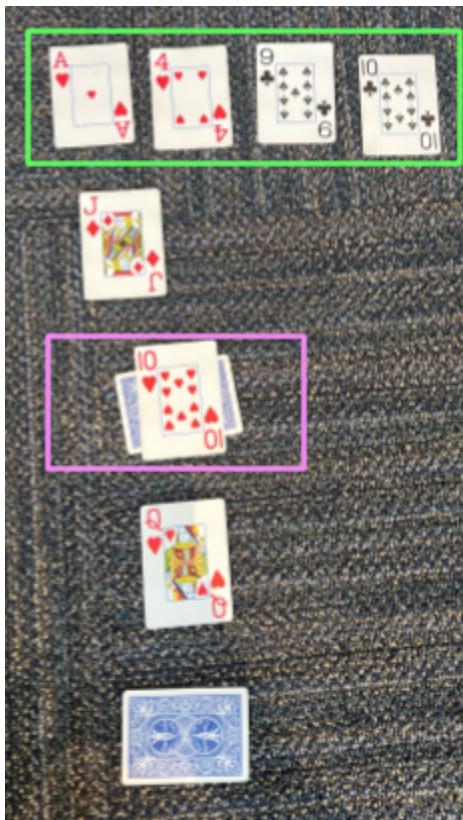
NAME; Start of block
"10"

Potential Output



TASK within block
"10"

End of block "10"



ACE of Hearts, check if $4 < 9$,
it is so go to Block "10"

TASK

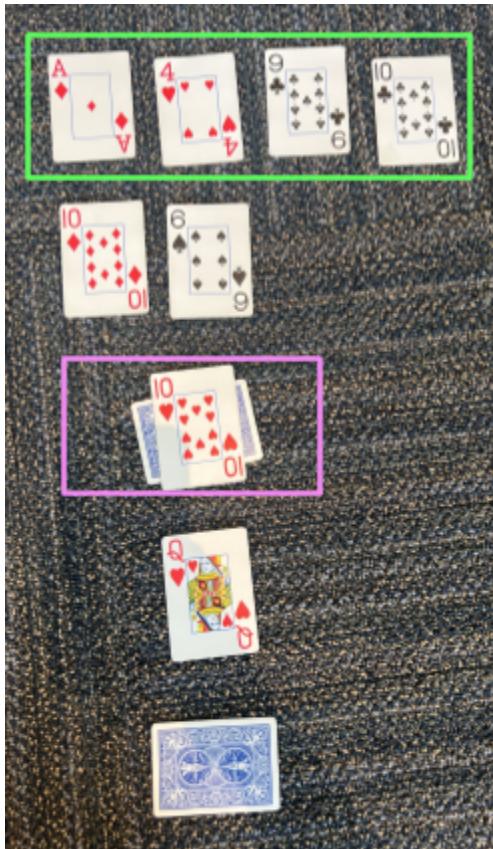
NAME; Start of block
"10"

Potential Output



TASK within block
"10"

End of block "10"



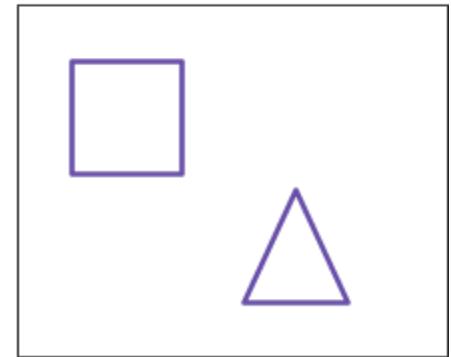
ACE of Diamond, check if $4 > 9$,
it is NOT so continue to next task

TASK

NAME; Start of block
“10”

Potential Output

TASK within block
“10”

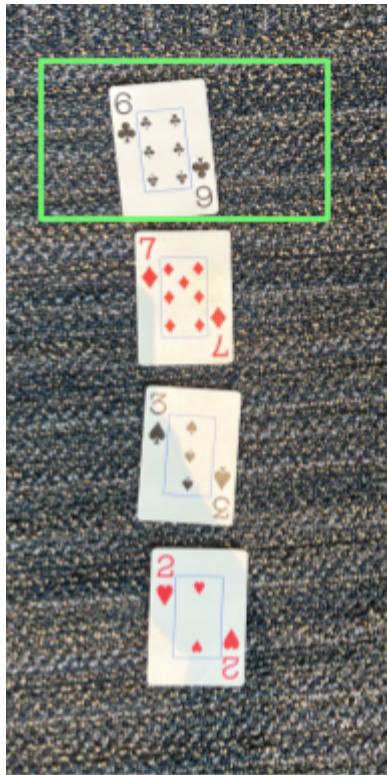


End of block “10”

Level 3

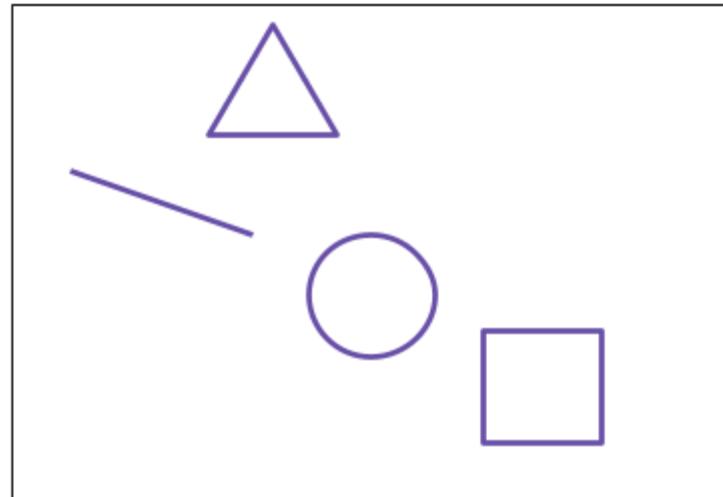
Action Cards:

- Any card can be an action (except for COMBO cards i.e. Face Cards and Aces)
- Action is now determined by suite
 - Spades: Draw a circle or clap your hands
 - Clubs: Draw a triangle or stomp your feet
 - Hearts: Draw a square or jump
 - Diamonds: Draw a line or shout hurray



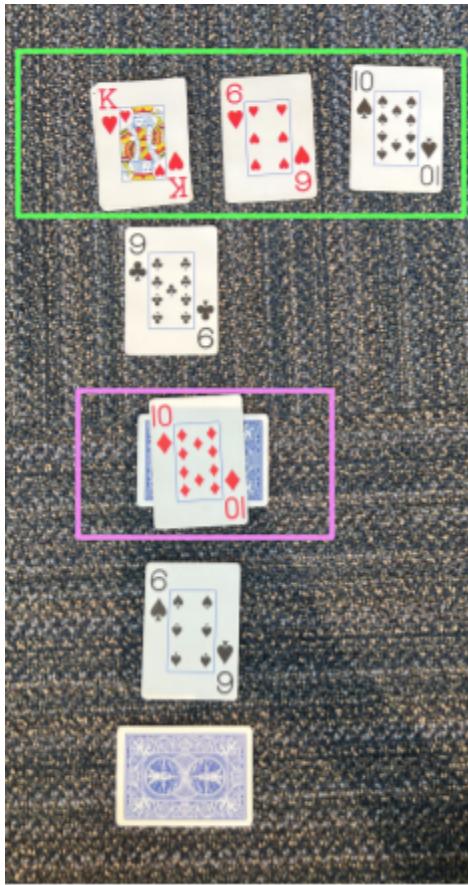
TASK; Made of 1 Action card

Potential Output



COMBO Cards:

- NAMEs work the same as in Levels 1 & 2
 - If you want to do something in a NAMEd block multiple times, now you still place a NAME card (a card with the same value as the NAME of the block), but now the second card gives you *both* the number of times (using the value) AND the ACTION from the suite.
- Aces work the same as described in Level 2
- Face cards, are now COMBO cards NOT ACTION cards
 - Kings: Look at the King card and the following card, if the color of the King and second card are DIFFERENT (red and black, or black and red), then go the NAMEd block, that is the block that corresponds to the value on the last card
 - Jacks: Look at the Jack and the following two cards. If one of the next two cards is the SAME color as the Jack, go to the NAMEd block
 - Queens: Ignore the Queen card, if the following two cards are the SAME color, go to the NAMEd block



Red King check if next card is Back,
it is NOT so continue to next task

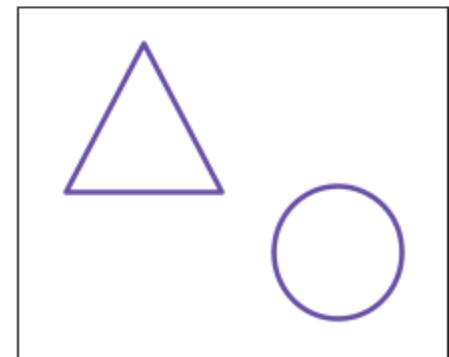
TASK

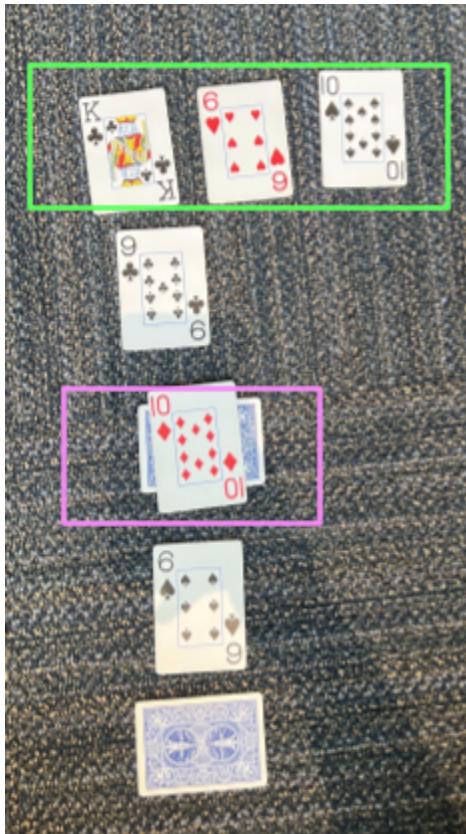
NAME; Start of block
“10”

Potential Output

TASK within block
“10”

End of block “10”





Black King check if next card is Red,
it is so go to Block "10"

TASK

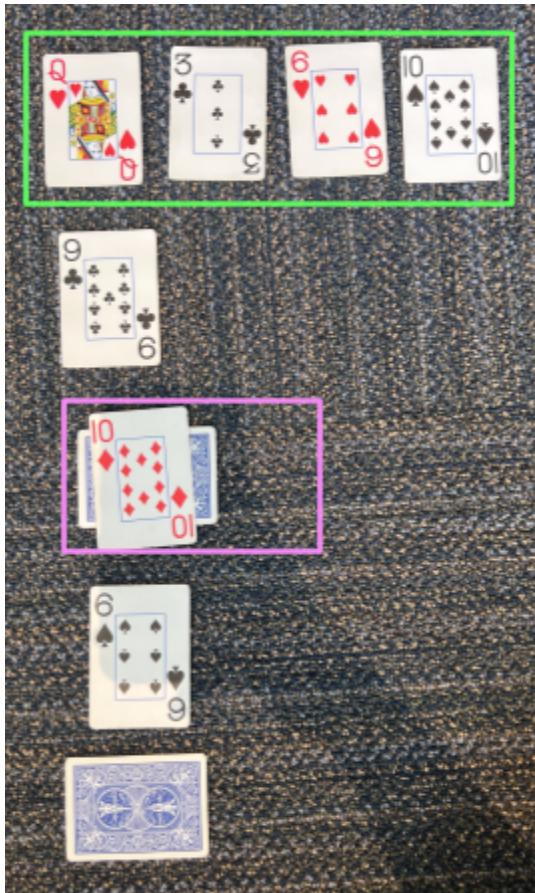
NAME; Start of block
"10"

Potential Output

TASK within block
"10"

End of block "10"





Queen check if next two cards are the
SAME color,
they are NOT so continue to next task

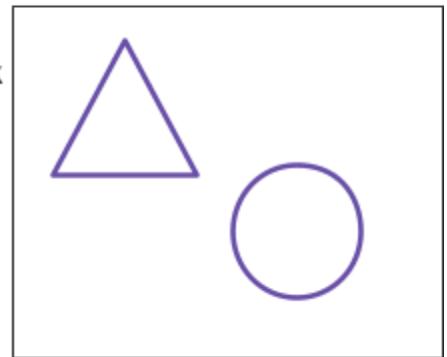
TASK

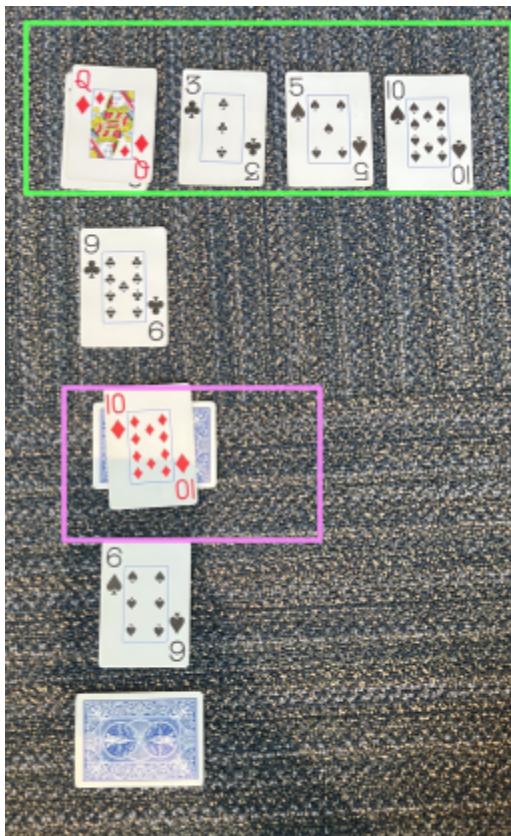
NAME; Start of block "10"

TASK within block
"10"

End of block "10"

Potential Output





Queen check if next two cards are the
SAME color,
they ARE so go to Block "10"

TASK

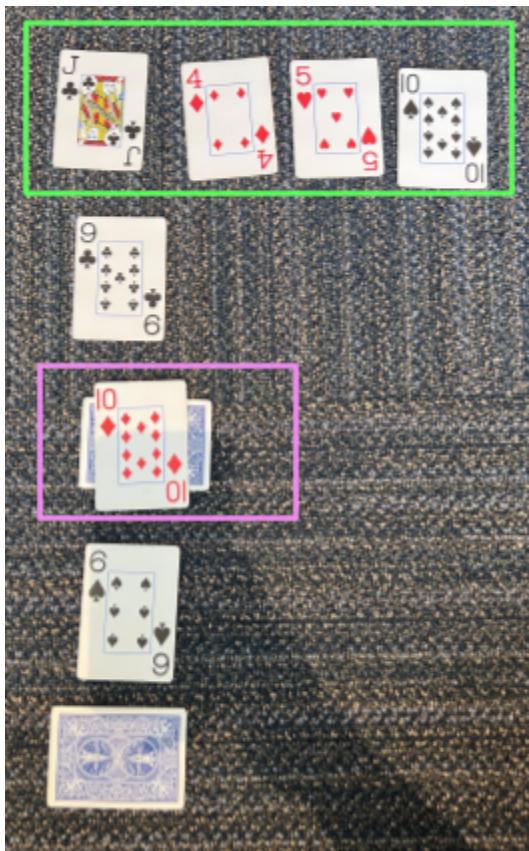
NAME; Start of block "10"

Potential Output

TASK within block
"10"

End of block "10"





Black Jack check if ONE of the two cards is Black
there is NOT so continue to next TASK

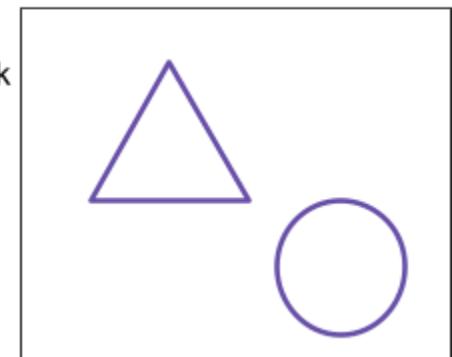
TASK

NAME; Start of block "10"

Potential Output

TASK within block
"10"

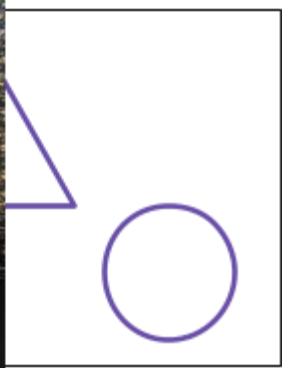
End of block "10"

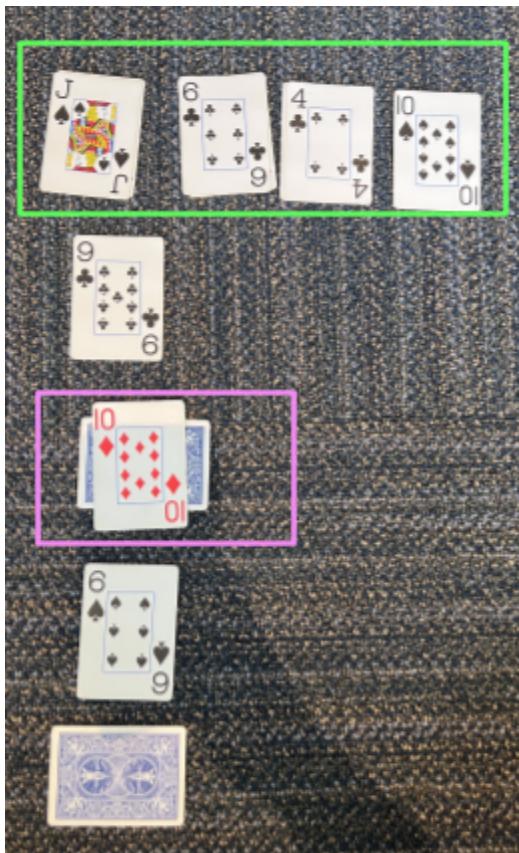




The two cards is Black
Go to next TASK

Potential Output





Black Jack check if ONE of the two cards is Black Jack
there is so go to Block "10"

TASK

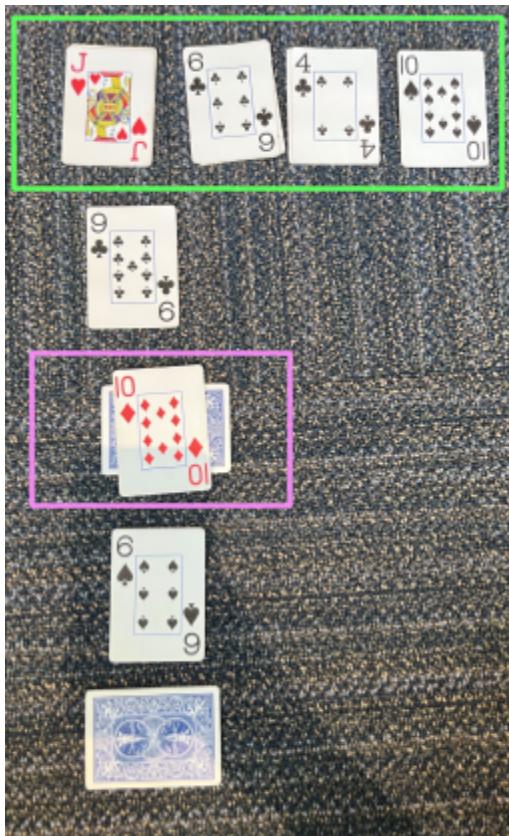
NAME; Start of block "10"

Potential Output

TASK within block
"10"

End of block "10"





Red Jack check if ONE of the two cards is Red
there is NOT so continue to next TASK

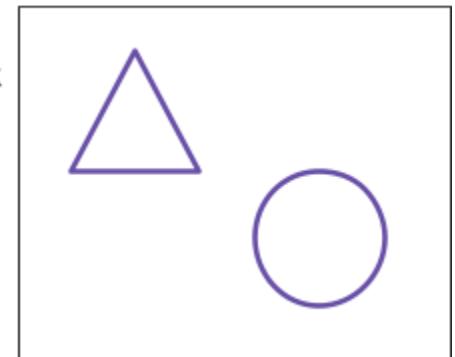
TASK

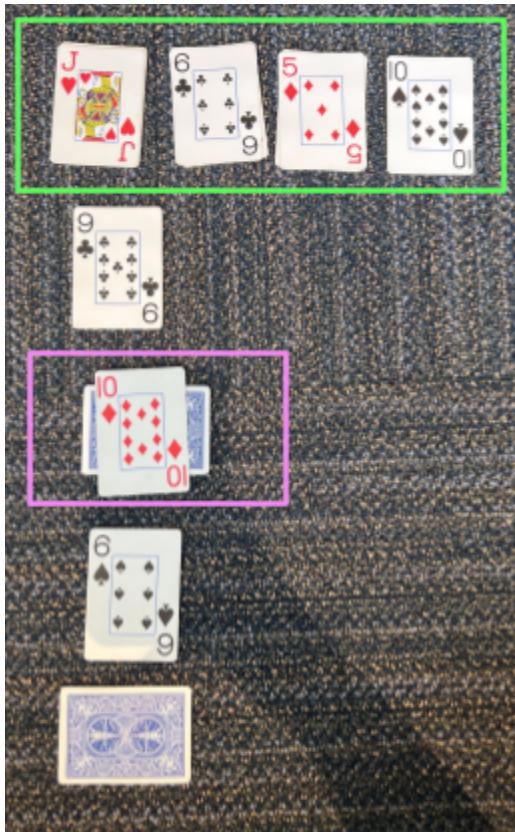
NAME; Start of block "10"

Potential Output

TASK within block
"10"

End of block "10"





Red Jack check if ONE of the two cards is Red
there is so go to Block "10"

TASK

NAME; Start of block "10"

Potential Output

TASK within block
"10"

End of block "10"



CHALLENGE

Potential Output

