|  |
| --- |
| **Scaffold: *Random number generation (RNG) games*** |
| **Task 1: Five Card Draw**The simplest way to complete this for a sound achievement is to take this code – <https://digisoln.com/python/pygame/both_coins> – and change the variables from heads and tails to card\_number\_1, card\_number\_2, etc. Download and unzip the card images from <https://digisoln.com/resources/cards/cards.zip> to the same folder as your Python file.The simplest way to make the card random is to try and adapt the code from here: <https://digisoln.com/python/pygame/random_coin>**Task 2: Modified Yahtzee**To complete this challenge, use <https://digisoln.com/python/pygame/dice_roll2> and change the variable dice to dice\_number\_1. Then add dice\_number\_2, dice\_number\_3, etc. You will also have to screen “blit” all of the new dice variables. The image load code in this sample will load on of the random dice images from the list. Download the dice images here <https://digisoln.com/resources/dice/dice.zip> and save them to your Python folder (the same folder as your Python script file).**Task 3: Cups**Try this <https://digisoln.com/python/pygame/cups_guessing_game> or <https://digisoln.com/python/pygame/cups_guessing_game_randomized>. These will probably meet most of the basic functionality required here. Some images to accompany your Python file that are also available at the bottom of the link samples above:<https://digisoln.com/python/pygame/images/cup.png><https://digisoln.com/python/pygame/images/cup_and_nothing.png><https://digisoln.com/python/pygame/images/cup_and_ball.png>**Task 4: Picture / word card game**This requires you to think and combine a few ideas from the different samples:* Show an image from file: <https://digisoln.com/python/pygame/image>
* Detect mouse click on an image: <https://digisoln.com/python/pygame/mouse_click_on_a_card>
* Choose between two card images: <https://digisoln.com/python/pygame/choose_between_two_cards>

The last of the samples above is a great way to give your two choices from an image (e.g., “Cat”, “Dog”). Using image buttons (i.e., pre-crafted PNG images with the words already painted onto them) is likely the easiest way. Text (<https://digisoln.com/python/pygame/text>) with a shape backing (<https://digisoln.com/python/pygame/draw_a_square>) is the alternative method here.**Task 5: PIN entry**Use the <https://digisoln.com/python/pygame/mouse_click_on_a_card> to detect a PIN button click on an image of a keypad (you will need 9 images to complete this in this way). Render the numbers entered to the console, alternately use <https://digisoln.com/python/pygame/text> to render the entered PIN to the screen (think about hiding the digits with \* symbols). |