

John Glbbons

Sep 8, 2019

CIS - 123

Ch .2

Exercise 1:

1. Get len_lot
2. Get wid_lot
3. Get len_house
4. Get wid_house
5. Get len_driveway
6. Get wid_driveway
7. Get sqft_bag
8. Get cost_bag

9. $\text{Area_lot} = \text{len_lot} * \text{wid_lot}$
10. $\text{Area_house} = \text{len_house} * \text{wid_house}$
11. $\text{Area_driveway} = \text{len_driveway} * \text{wid_driveway}$

12. $\text{Area_fertilize} = \text{area_lot} - \text{area_house} - \text{area_driveway}$
13. $\text{Bags} = \text{area_fertilize} / \text{sqft_bag}$
14. $\text{Cost} = \text{bags} * \text{cost_bag}$

15. Display bags
16. Display cost

Exercise 2:

1. Get len_lot
2. Get wid_lot

3. $\text{Sqft_lot} = \text{len_lot} * \text{wid_lot}$
4. $\text{Acre_lot} = \text{Sqft_lot} / 43560$

5. Display Acre_lot

Exercise 3:

1. If shoot key is pressed make a new bullet object at ship.x and ship.y
2. $\text{Bullet.x} += \text{bullet_speed}$
3. $\text{Bullet.y} += \text{bullet_speed}$
4. For each asteroid do
5. If bullet.x contains asteroid.x and bullet.y contains asteroid.y then kill bullet and call asteroid.Split
6. End
7. If Asteroid.size ≤ 1 then kill asteroid else call Asteroid.Split
8. Asteroid.split function does $\text{asteroid.size}/2$ and
9. Asteroid makes a new asteroid object at asteroid.x and asteroid.y with asteroid.size

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Exercise 4:

1. Get num_cookies
2. Get cal_per_cookie
3. $\text{Total_calories} = \text{num_cookies} * \text{cal_per_cookie}$
4. Display Total_calories

Exercise 5:

1. Get meal_cost
2. $\text{Tip} = \text{meal_cost} * .2$
3. Display Tip

Exercise 6:

1. Get desired_cookies
2. $\text{Sugar} = 1.5 / 48$
3. $\text{Butter} = 1 / 48$
4. $\text{Flour} = 2.75 / 48$
5. $\text{desired_sugar} = \text{desired_cookies} * \text{Sugar}$
6. $\text{desired_butter} = \text{desired_cookies} * \text{Butter}$
7. $\text{desired_flour} = \text{desired_cookies} * \text{flour}$
8. Display desired_sugar , desired_butter, desired_flour

Exercise 7:

1. Get old_odometer
2. Get new_odometer
3. Get tank_capacity
4. Get tank_fill_percentage
5. $\text{miles_delta} = \text{new_odometer} - \text{old_odometer}$
6. $\text{gallon_delta} = \text{tank_capacity} - (\text{tank_fill_percentage} * \text{tank_capacity})$
7. $\text{Mpg} = \text{miles_delta} / \text{gallon_delta}$
8. Display Mpg

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Exercise 8:

1. Get c
2. $F = c * 9/5 + 32$
3. Display F

Exercise 9

1. Get speed
2. Get time_traveled
3. $\text{Distance_traveled} = \text{speed} * \text{time_traveled}$
4. Display distance_traveled

Exercise 10:

1. Get movie_time
2. Get is_movie_G
3. Get age
4. If time is after 1 pm then base_price = 14
5. Else base_price = 10
6. If age ≤ 12 and is_movie_G then final_price = base_price * .9
7. If age ≥ 65 then final_price = base_price * .75
8. Display final_price