Week 5: moving ship, bullet

Introduction week 5:

This week you will add movement to your ship and create the shooting feature.

Instructions:

Interrupts:

COMP.CE.100_exercise_guide.pdf, page 11

Project_work_extra_material_v3, slides 2-6

Project_work_info, slides 25-30

Memory addresses and bit orders:

COMP.CE.100_exercise_guide.pdf, page 12

GPIO interrupts:

GPIO interrupt happens when button is pressed or switch is switched. When one of these actions happens, the ButtonHandler() interrupt handler is called. ButtonHnadler() has parameter Status which tells which one of the buttons or switches caused the interruption. So you should implement if or switch statements to check this and to make the correct actions to happen. You can choose which button does what, but some buttons needs to move the ship to left and right and some needs to fire a bullet.

Moving the ship:

When button is pressed to move the ship, you need to clear and draw new pixels accordingly. You probably need to keep track on the ship's location somehow and make sure that the ship can not go outside the screen.

Shooting:

When shooting button is pressed, the ship should fire a bullet upwards. Keep track of the location of the bullet and create movement for it similarly as with the alien.

After this week you should *know and undesrstand*:

How to detect which action initiated the GPIO interrupt.

After this week you *should have finished*:

Moving ship and bullet.