Remote Control with Backup Sounds

Time required: 45 minutes

Please read all the directions carefully before beginning the assignment.

- Comment your code as shown in the tutorials and other code examples.

- Follow all directions carefully and accurately.

- Think of the directions as minimum requirements.

Understanding
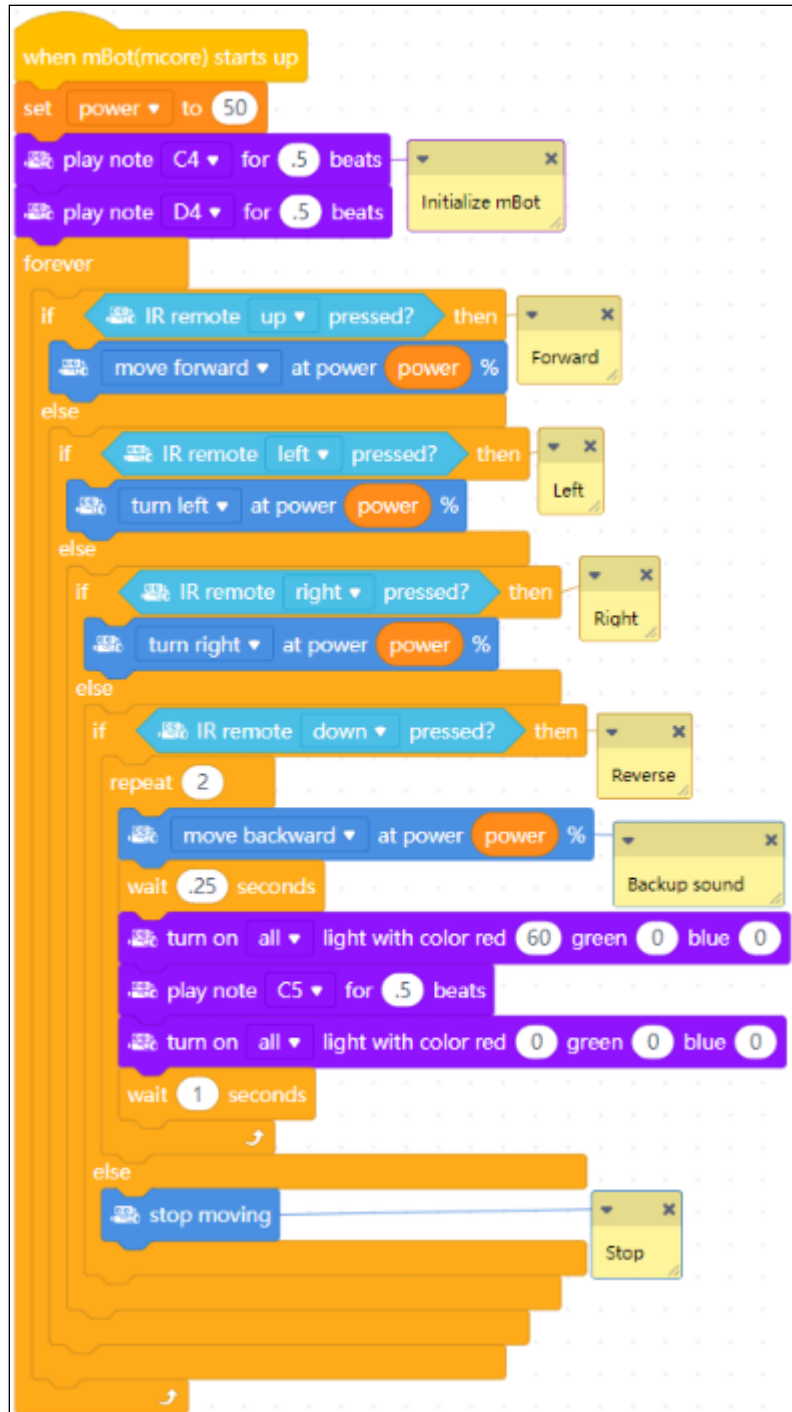
Demonstrate understanding of:

variables, for loops

Knowledge Points

Requirements

This program simulates the backup sound of a dump truck or payloader.

Assignment

1. Save your Arduino **SimpleRemoteControl** sketch as **RemoteControlBackup**

2. Add some backup sounds to your simple remote sketch using a for loop. Use the mBlock program shown as a guide to build your backup sounds.

3. Add your own sounds and lights.

```
when mBot(mcore) starts up
set  power ▾  to  50
🔊 play note  C4 ▾  for  .5  beats ─┐ ▾          ✕
🔊 play note  D4 ▾  for  .5  beats    Initialize mBot
forever
    if  🔊 IR remote  up ▾  pressed?  then ─┐ ▾          ✕
        🚗 move forward ▾  at power  power  %    Forward
    else
        if  🔊 IR remote  left ▾  pressed?  then ─┐ ▾   ✕
            🚗 turn left ▾  at power  power  %    Left
        else
            if  🔊 IR remote  right ▾  pressed?  then ─┐ ▾   ✕
                🚗 turn right ▾  at power  power  %    Right
            else
                if  🔊 IR remote  down ▾  pressed?  then ─┐ ▾   ✕
                    repeat  2    Reverse
                        🚗 move backward ▾  at power  power  %  ─┐ ▾          ✕
                        wait  .25  seconds    Backup sound
                        🔊 turn on  all ▾  light with color red  60  green  0  blue  0
                        🔊 play note  C5 ▾  for  .5  beats
                        🔊 turn on  all ▾  light with color red  0  green  0  blue  0
                        wait  1  seconds
                else
                    🚗 stop moving ───── ▾   ✕
                                          Stop
```

Assignment Submission

- **All students** → Attach finished programs to the assignment in Blackboard.

- **In class assignment submission** → Demonstrate in person.

- **Online submission** → A link to a YouTube video recording showing the assignment placed in the submission area in BlackBoard.