

Outline LCD context menu creation explanation:

Document issue 1.0A

Author: Michał Wołowik

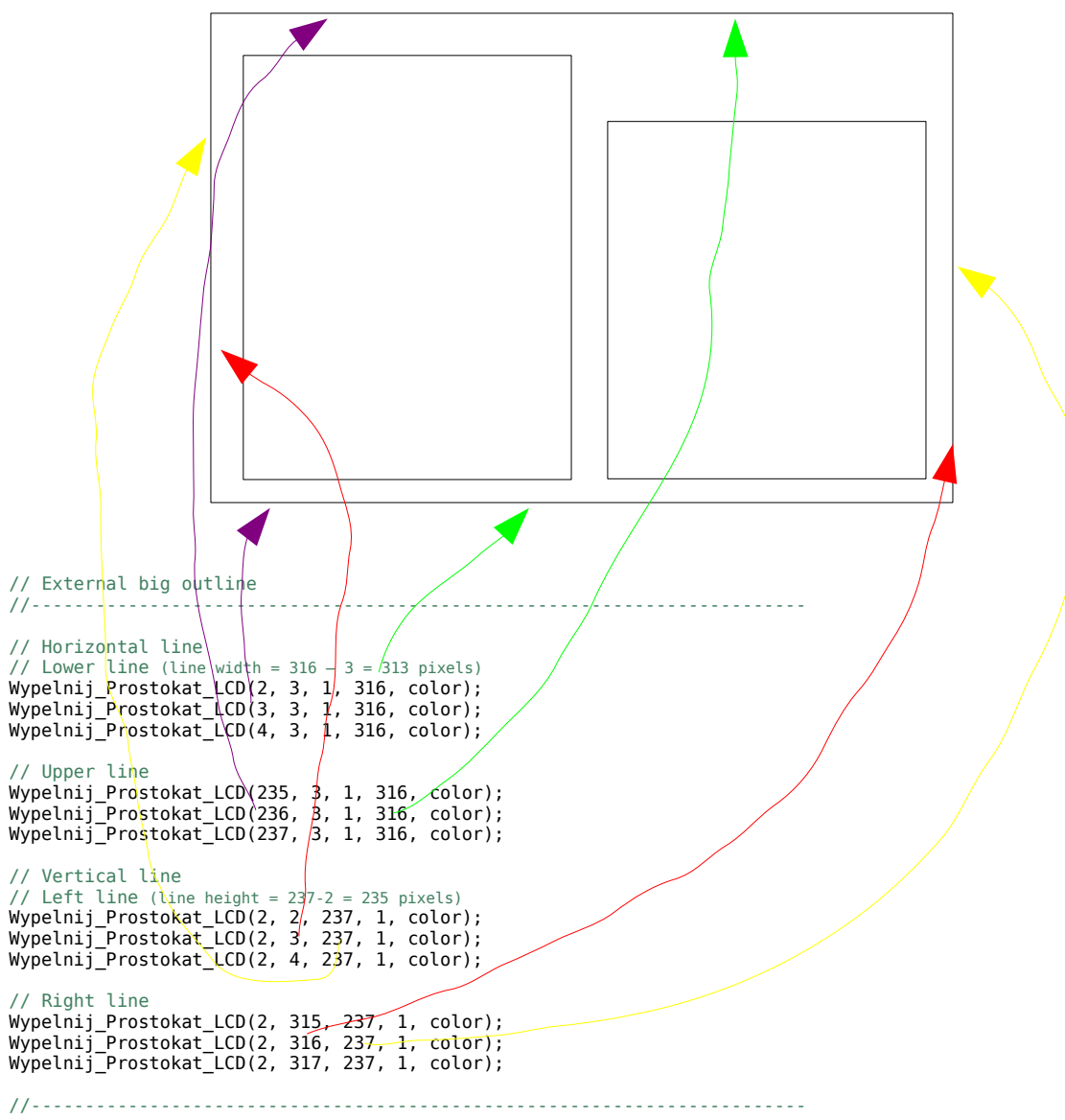
Date: 11.X.2010 Rzeszów

1. First outline.

First outline is created by function: „**void First_Main_Menu(unsigned char state);**”

Explanation:

Picture outline – External big outline explanation



Legend:

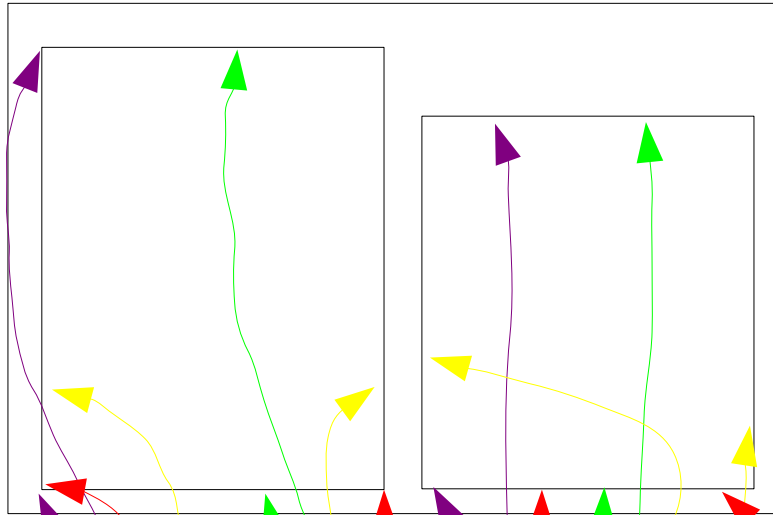
Green line means line width

Yellow line means line high

Magenta line means line horizontal position

Red line means line vertical position

Picture outline – Left outline with adjusted values



```
// Left outline with adjusted values
//-----
// Horizontal line (line width = 150 - 15 = 135 pixels)
// Low line
Wypelnij_Prostokat_LCD(10, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(11, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(12, 15, 1, 150, color);

// High line
Wypelnij_Prostokat_LCD(231, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(230, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(229, 15, 1, 150, color);
```

```
// Vertical line
// Left line (line height = 231-10 = 221 pixels)
Wypelnij_Prostokat_LCD(10, 14, 231, 1, color);
Wypelnij_Prostokat_LCD(10, 15, 231, 1, color);
Wypelnij_Prostokat_LCD(10, 16, 231, 1, color);

// Right line
Wypelnij_Prostokat_LCD(10, 148, 231, 1, color);
Wypelnij_Prostokat_LCD(10, 149, 231, 1, color);
Wypelnij_Prostokat_LCD(10, 150, 231, 1, color);
```

```
//-----
```

```
// Right outline with adjusted values
//-----
// Horizontal line (line width = 305 - 165 = 140 pixels)
// Low line
Wypelnij_Prostokat_LCD(10, 165, 1, 305, color);
Wypelnij_Prostokat_LCD(11, 165, 1, 305, color);
Wypelnij_Prostokat_LCD(12, 165, 1, 305, color);

// High line
Wypelnij_Prostokat_LCD(190, 165, 1, 305, color);
Wypelnij_Prostokat_LCD(189, 165, 1, 305, color);
Wypelnij_Prostokat_LCD(188, 165, 1, 305, color);
```

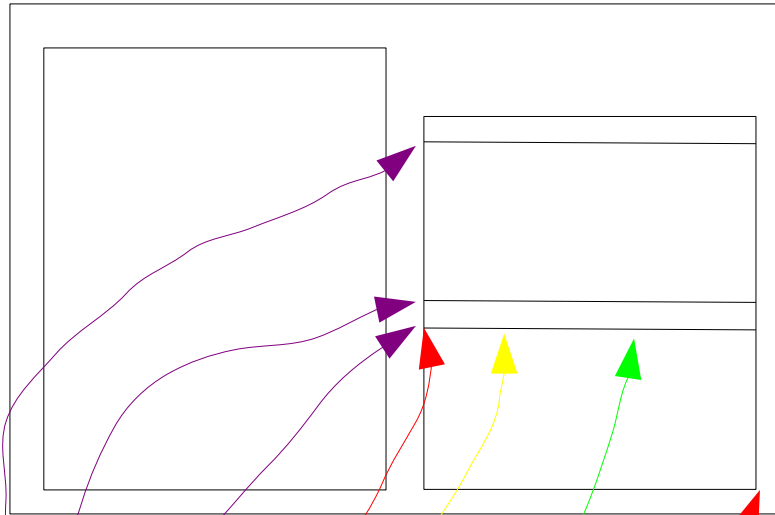
```
// Vertical line
// Left line (line height = 190-10 = 180 pixels)
Wypelnij_Prostokat_LCD(10, 166, 190, 1, color);
Wypelnij_Prostokat_LCD(10, 165, 190, 1, color);
Wypelnij_Prostokat_LCD(10, 164, 190, 1, color);

// Right line
Wypelnij_Prostokat_LCD(10, 306, 190, 1, color);
Wypelnij_Prostokat_LCD(10, 305, 190, 1, color);
Wypelnij_Prostokat_LCD(10, 304, 190, 1, color);
```

```
//-----
```

Legend:
 Green line means line width
 Yellow line means line high
 Magenta line means line horizontal position
 Red line means line vertical position

Picture outline – Right outline with adjusted values



```
// Right outline middle line and upper and higher - context menu
```

```
//-----
```

```
// Horizontal line
```

```
// middle low line (line width = 305 - 165 = 140 pixels)
```

```
Wypelnij_Prostokat_LCD(84, 165, 1, 305, color);
```

```
Wypelnij_Prostokat_LCD(85, 165, 1, 305, color);
```

```
Wypelnij_Prostokat_LCD(86, 165, 1, 305, color);
```

```
// middle line
```

```
Wypelnij_Prostokat_LCD(100, 165, 1, 305, color);
```

```
Wypelnij_Prostokat_LCD(101, 165, 1, 305, color);
```

```
Wypelnij_Prostokat_LCD(102, 165, 1, 305, color);
```

```
// middle high line
```

```
Wypelnij_Prostokat_LCD(174, 165, 1, 305, color);
```

```
Wypelnij_Prostokat_LCD(173, 165, 1, 305, color);
```

```
Wypelnij_Prostokat_LCD(172, 165, 1, 305, color);
```

```
//-----
```

Legend:

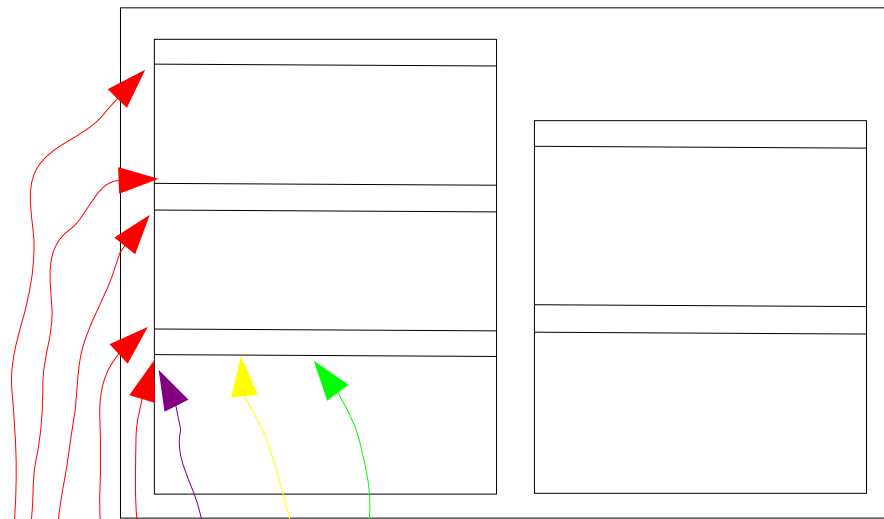
Green line means line width

Yellow line means line high

Magenta line means line horizontal position

Red line means line vertical position

Picture outline – Left outline middle line and upper and higher



```
// Left outline middle line and upper and higher
//-----

// Horizontal line
// low line 1 (line width = 150 - 15 = 135 pixels)
Wypelnij_Prostokat_LCD(67, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(68, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(69, 15, 1, 150, color);

// low line 2
Wypelnij_Prostokat_LCD(82, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(83, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(84, 15, 1, 150, color);

// middle line 3
Wypelnij_Prostokat_LCD(139, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(140, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(141, 15, 1, 150, color);

// High line 4
Wypelnij_Prostokat_LCD(155, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(156, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(157, 15, 1, 150, color);

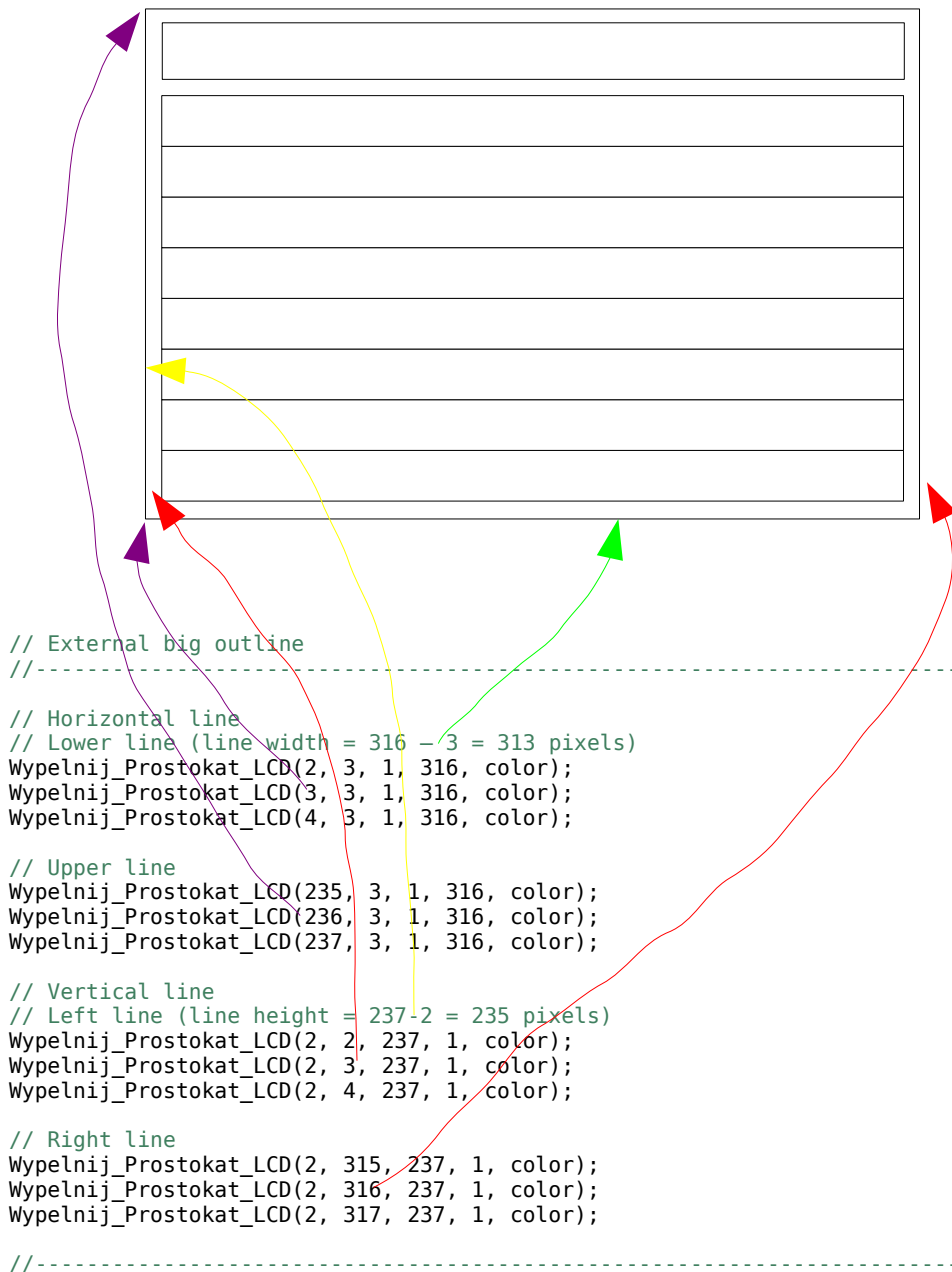
// High line 5
Wypelnij_Prostokat_LCD(214, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(213, 15, 1, 150, color);
Wypelnij_Prostokat_LCD(212, 15, 1, 150, color);
//-----
```

Legend:
 Green line means line width
 Yellow line means line high
 Magneta line means line horizontal position
 Red line means line vertical position

2. Second outline.

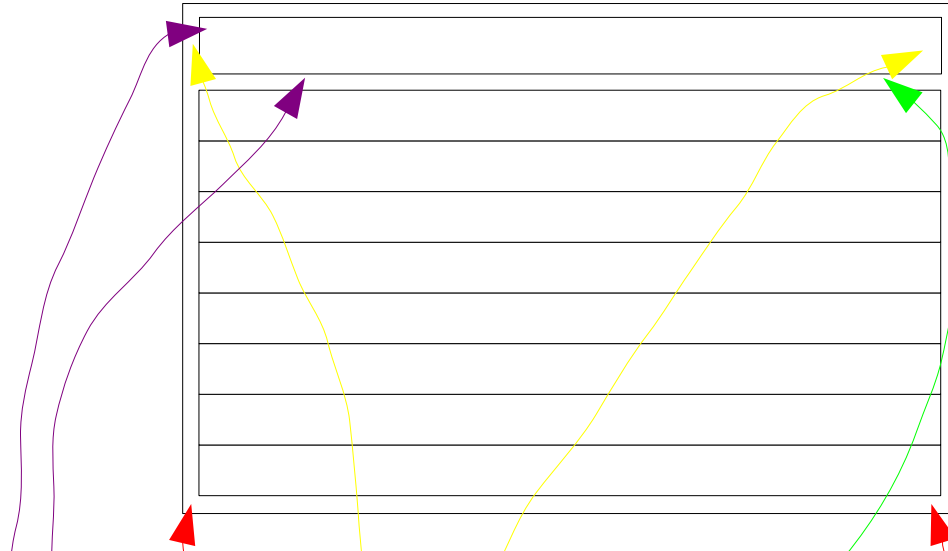
Second outline is created by function: „**void First_Main_Menu(unsigned char state);**”

Picture outline – External big outline explanation



Legend:
Green line means line width
Yellow line means line high
Magenta line means line horizontal position
Red line means line vertical position

Picture outline – horizontal menu upper menu (menu title)



```
// Upper information which inform which menu enter
// Vertical line
//-----
// Left line (line height = 231-208 = 23 pixels)
Wypelnij_Prostokat_LCD(208, 9, 231, 1, color);
Wypelnij_Prostokat_LCD(208, 10, 231, 1, color);
Wypelnij_Prostokat_LCD(208, 11, 231, 1, color);

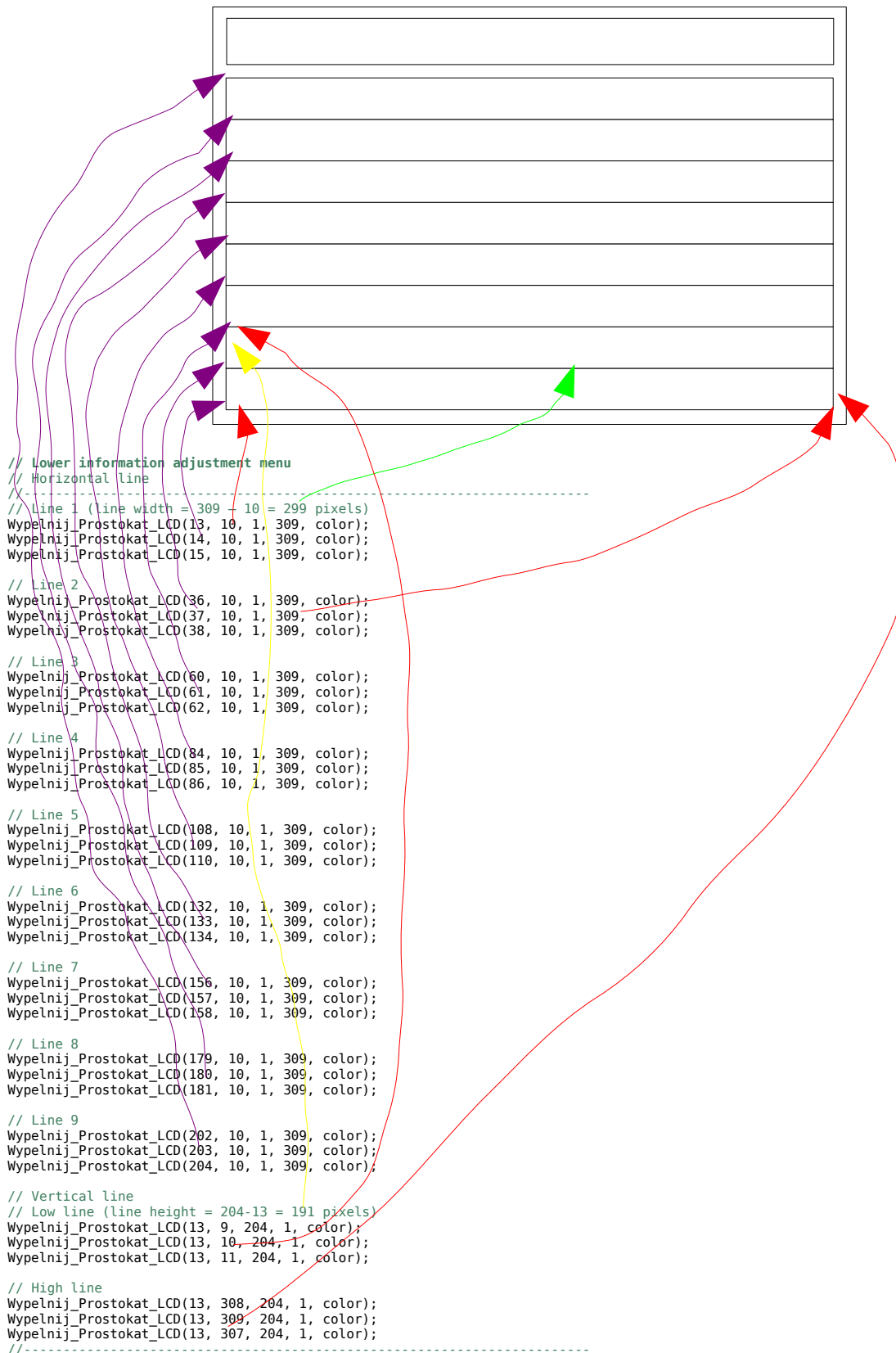
// Right line
Wypelnij_Prostokat_LCD(208, 308, 231, 1, color);
Wypelnij_Prostokat_LCD(208, 309, 231, 1, color);
Wypelnij_Prostokat_LCD(208, 307, 231, 1, color);

// Horizontal
// Low line (line width = 309 - 9 = 300 pixels)
Wypelnij_Prostokat_LCD(207, 9, 1, 309, color);
Wypelnij_Prostokat_LCD(208, 9, 1, 309, color);
Wypelnij_Prostokat_LCD(209, 9, 1, 309, color);

// High line
Wypelnij_Prostokat_LCD(230, 9, 1, 309, color);
Wypelnij_Prostokat_LCD(231, 9, 1, 309, color);
Wypelnij_Prostokat_LCD(232, 9, 1, 309, color);
//-----
```

Legend:
Green line means line width
Yellow line means line high
Magenta line means line horizontal position
Red line means line vertical position

Picture outline – horizontal menu lower menu (submenu titles)



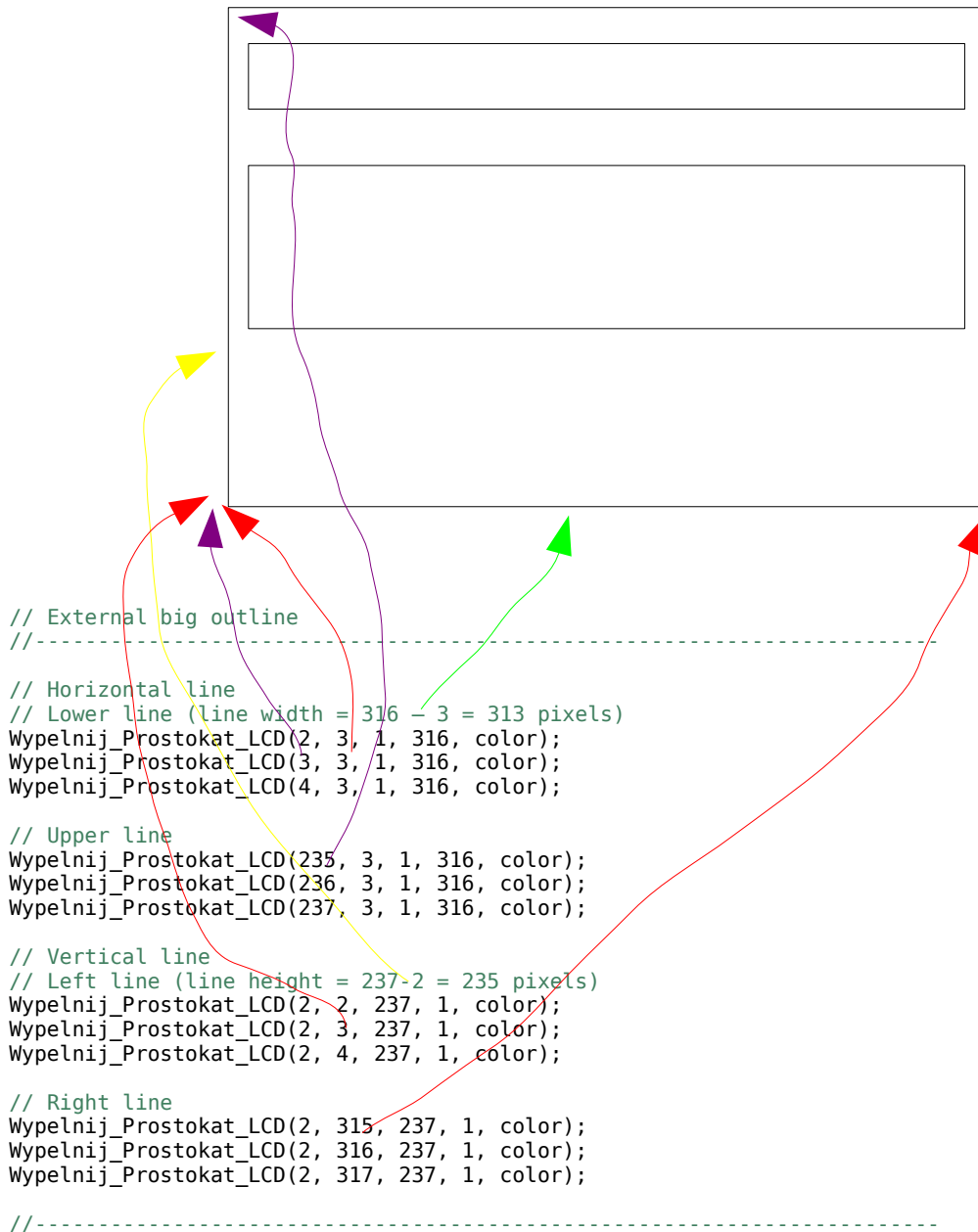
Legend:

- Green line means line width
- Yellow line means line high
- Magenta line means line horizontal position
- Red line means line vertical position

3. Third outline.

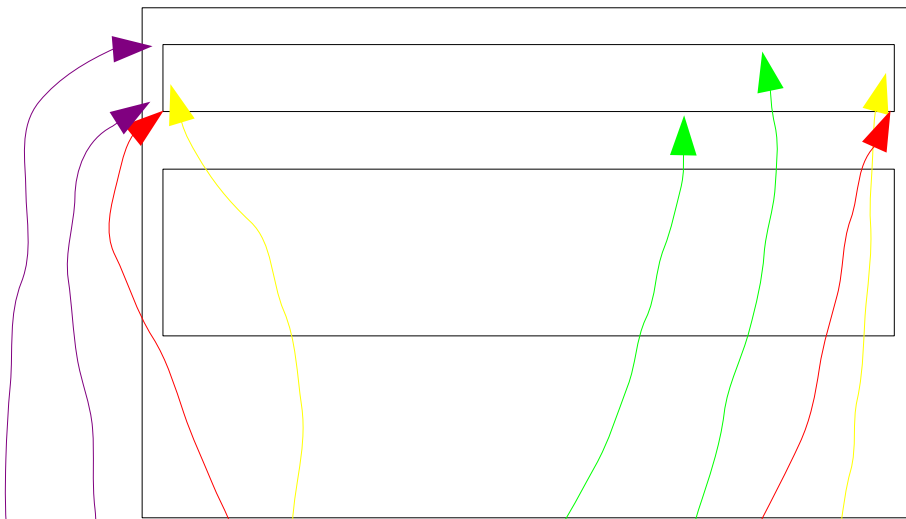
Third outline is created by function: „**void Third_Main_Menu(unsigned char state);**”

Picture outline – External big outline explanation



Legend:
Green line means line width
Yellow line means line high
Magenta line means line horizontal position
Red line means line vertical position

Picture outline – Upper information about menu title



```
// Upper information about menu title
// Horizontal line
//-----
// Low line (line width = 309 - 10 = 299 pixels)
Wypelnij_Prostokat_LCD(180, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(181, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(182, 10, 1, 309, color);

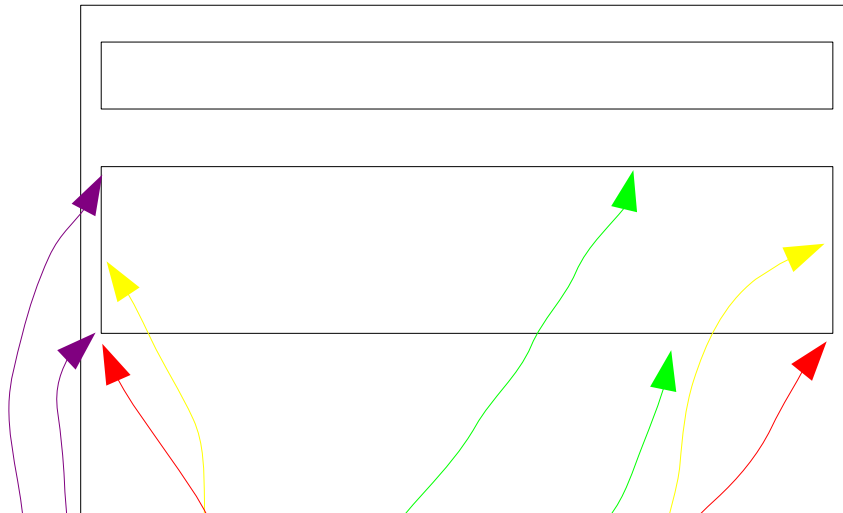
// High line
Wypelnij_Prostokat_LCD(226, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(227, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(228, 10, 1, 309, color);

// Vertical line - upper information about selected menu
// Left line (line height = 228-180 = 48 pixels)
Wypelnij_Prostokat_LCD(180, 9, 228, 1, color);
Wypelnij_Prostokat_LCD(180, 10, 228, 1, color);
Wypelnij_Prostokat_LCD(180, 11, 228, 1, color);

// Right line
Wypelnij_Prostokat_LCD(180, 308, 228, 1, color);
Wypelnij_Prostokat_LCD(180, 309, 228, 1, color);
Wypelnij_Prostokat_LCD(180, 307, 228, 1, color);
//-----
```

Legend:
Green line means line width
Yellow line means line high
Magenta line means line horizontal position
Red line means line vertical position

Picture outline – Lower information about adjusted value



```
// Lower information about adjusted value
// Horizontal line
//-----
// Low line (line width = 309 - 10 = 299 pixels)
Wypelnij_Prostokat_LCD(70, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(71, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(72, 10, 1, 309, color);
```

```
// High line
Wypelnij_Prostokat_LCD(161, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(162, 10, 1, 309, color);
Wypelnij_Prostokat_LCD(163, 10, 1, 309, color);
```

```
// Vertical line
```

```
// Left line (line height = 163-70 = 93 pixels)
Wypelnij_Prostokat_LCD(70, 9, 163, 1, color);
Wypelnij_Prostokat_LCD(70, 10, 163, 1, color);
Wypelnij_Prostokat_LCD(70, 11, 163, 1, color);
```

```
// Right line
Wypelnij_Prostokat_LCD(70, 308, 163, 1, color);
Wypelnij_Prostokat_LCD(70, 309, 163, 1, color);
Wypelnij_Prostokat_LCD(70, 307, 163, 1, color);
//-----
```

Legend:
Green line means line width
Yellow line means line high
Magenta line means line horizontal position
Red line means line vertical position