Faculty of Computers, Informatics and Microelectronics

Technical University of Moldova

WINDOWS PROGRAMMING (ANDROID)

Laboratory work #1

Window. Basic window's form elements

Authors:
Anatolie Iuzvac

Supervisor:
Irina Cojanu

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1 Purpose of the laboratory

Gain knowledge about basics of event-driven programming, understanding of window's class and basic possibilities of Win32 API. Also she will try to understand and process OS messages.

2 Laboratory Work Requirements

– **Basic Level (grade 5 - 6) you should be able to:**

a) Create a Windows application

b) In the middle of the window should be present the following text: "Done with Pride and Prejudice by student name". Replace student name with your name.

c) On windows resize, text should reflow and be in window's middle (vertically and horizontally)

– **Normal Level (grade 7 - 8) you should be able to:**

a) Realize the tasks from *Basic Level*.

b) Add 2 buttons to window: one with default styles, one with custom styles (size, background, text color, font family/size)

c) Add 2 text elements to window: one with default styles, one with custom styles (size, background, text color, font family/size)

– **Advanced Level (grade 9 - 10) you should be able to:**

a) Realize the tasks from *Normal Level*.

b) Make elements to interact or change other elements (2 different interactions) (ex. on button click, change text element color or position)

c) Change behavior of different window actions (at least 3). For ex.: on clicking close button, move window to a random location on display working space

3 Laboratory work implementation

3.1 Tasks and Points

a) Create a Windows application

b) In the middle of the window should be present the following text: "Done with Pride and Prejudice by student name". Replace student name with your name.

c) On windows resize, text should reflow and be in window's middle (vertically and horizontally).

d) Add 2 buttons to window: one with default styles, one with custom styles (size, background, text color, font family/size).

e) Add 2 text elements to window: one with default styles, one with custom styles (size, background, text color, font family/size).

f) Make elements to interact or change other elements (2 different interactions) (ex. on button click, change text element color or position).

g) Changed behavior of only one window action due to the fat that I were programming in Android and was overridden only back button functionality

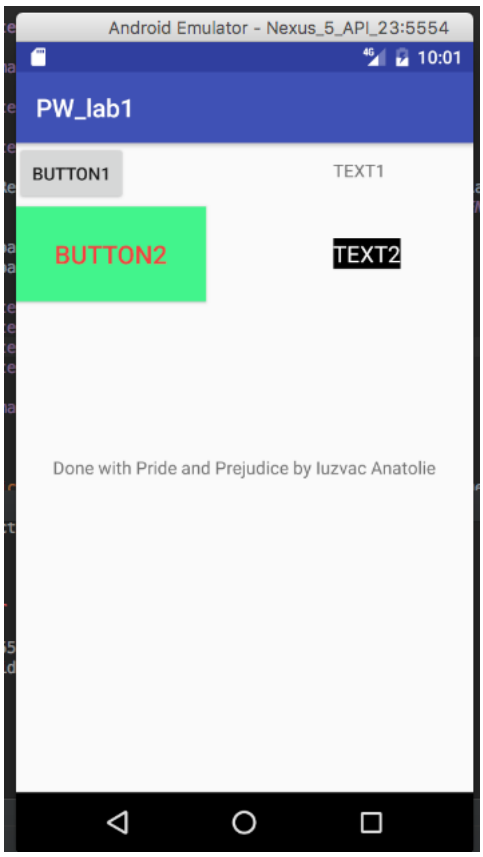
3.2 Laboratory work analysis

Link to my GitHub repository :
`https://github.com/Tolea86/WP_ANDROID/tree/master/LAB_1/PW_lab1`

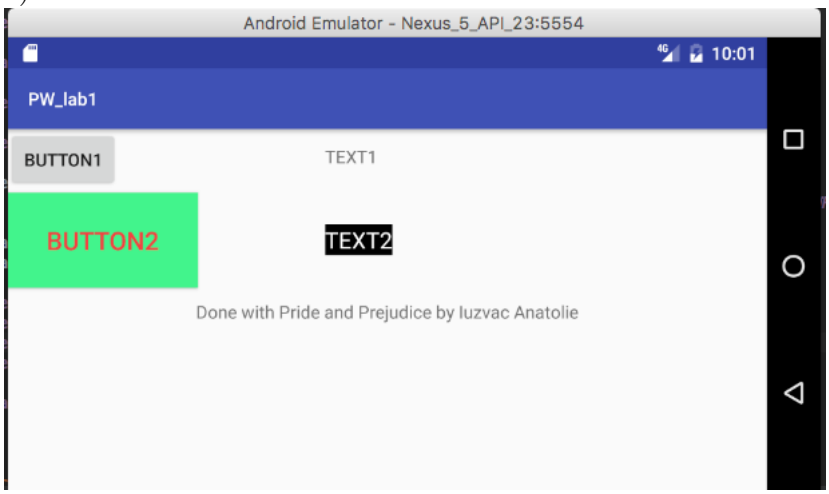
My application has following features : it has a text centered in the middle, which re-centers on resize, it has two text views one with default style and one with custom style, it has two buttons one with default style and one with custom style both with actions, clicking on button1 will change the text of text1, clicking on button2 will change the background color of button1 to a random color. Also is overridden the functionality of back button from Android.

3.3 Prove your work with screens

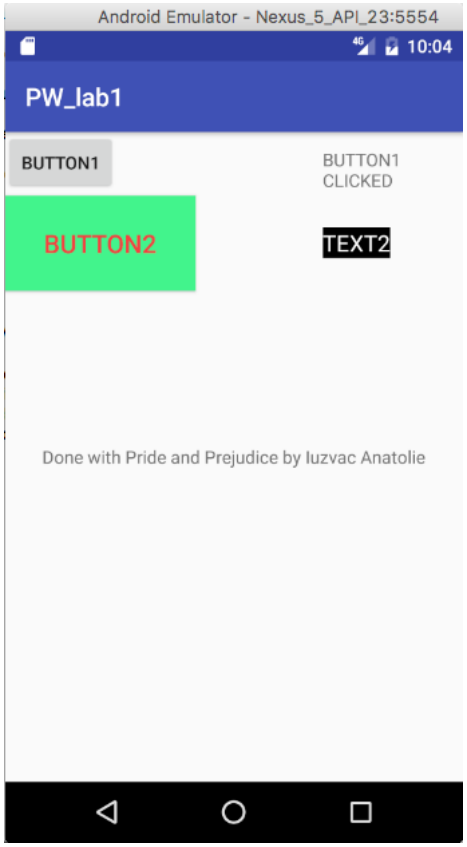
a), b), d), e)



c)

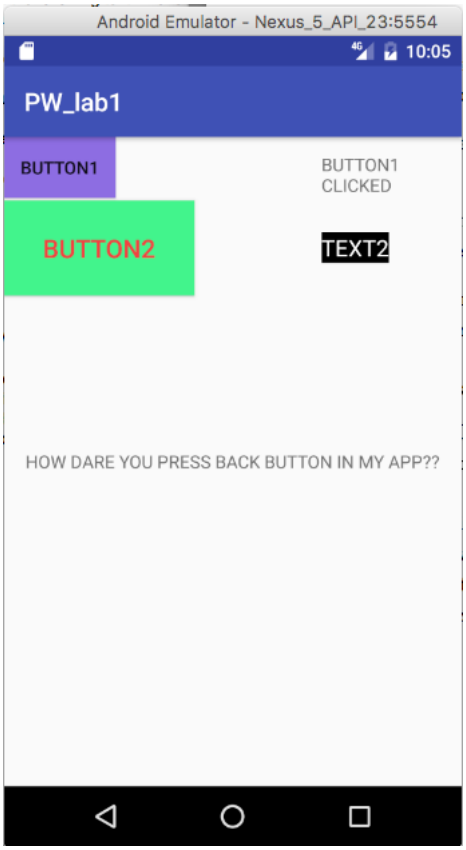


f) button1 clicked



f) button2 clicked

g) back button clicked


Android Emulator - Nexus_5_API_23:5554
10:05
PW_lab1
BUTTON1
BUTTON1
CLICKED
BUTTON2
TEXT2
HOW DARE YOU PRESS BACK BUTTON IN MY APP??

Conclusions

In this laboratory work we've studied the basic and window's possibilities of Android window and understood to process the OS messages. We have developed an app with text in the middle which re-center on resize, had added 2 texts one with default style and one with custom style, had added two buttons also one with default style and one with custom style, had added actions to both buttons and overridden the back button functionality of Android device.

References

1 Android Developers Guide, *official page*, https://developer.android.com/guide/index.html

2 StackOverflow, *official page* , http://stackoverflow.com/

3 LaTeX Tutorial, *youtube page*, https://www.youtube.com/watch?v=SoDv0qhyysQ