Școala informală de IT

Cultivăm dorința de evoluție personală!

Un proiect al **Asociației pentru Educație Informală**, în colaborare cu:

Griffiths School of Management; **Soluții Avansate SRL**; **Talpoș & Partners SRL**, **Organizația Tineret pentru Europa, Scoala Internationala Cluj Napoca, Fortech, Endava, BCR, RedKiwi, Psihoselect, BuzzNews** si **Radio Transilvania.**

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Prieteni

Mobile Platforms Overview – iOS

- Developed by Apple
- Closed source, exclusively for Apple hardware
- Objective C programming language
- iOS SDK, Xcode IDE for development
- Apple Store for applications download
- iOS Versions:
  - 1.0
  - 2.0
  - 3.0, 3.1.1, 3.2
  - 4.0, 4.1, 4.2.1, 4.3
  - 5.0, 5.1
  - 6.0, 6.0.1
  - 7.0, 7.0.3, 7.0.4, 7.1.2
  - Next release 8.0 (September 17th)
- iOS Devices:
  - iPhone 1, 3G, 3GS, 4, 4S, 5, 5S, 5C
  - iPad 1st -4th generation, Air
  - iPad Mini 1st, 2nd generation
  - iPod Touch 1st -5th generation

Using iTunes:

- Start iTunes
- Select device and then go to Apps tab
- Drag and drop the build
- Press Sync button in iTunes

Using TestFlight 3rd party application

Check logs in console:
- Start iPhone Configuration Utility
- Select device and then go to Console tab (in the right side of the window)

Crash Logs:
- iTunes sync
- Go to C:\Users\<username>\AppData\Roamning\Apple Computer\Logs\CrashReporter\ MobileDevice\<device_name>
- The log is named <app_name>_<date>_<device_name>.crash
- .log extension for low memory

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- Hold the Home and Power buttons
- The screenshot is available under Camera / Camera Roll

Force Close:

- Double tap on the home button; all open apps are available
- Swipe between apps and find the application you wish to force close
- Remove it from the list by dragging it

Uninstall:

- Search for the app you wish to uninstall
- Long tap on it
- Tap the x button associated to it
- Confirm the deletion
- Tap home button

- Developed by Google
- The largest installed base worldwide
- Mainly free and open source
- Java programming language
- Android SDK, Eclipse IDE for development
- Google Play for applications download
- Multiple vendors
- OS Versions:
  - Cupcake (1.5), Donut (1.6)
  - Eclair (2.0), Frozen Yogurt ("Froyo") (2.2), Ginger Bread (2.3)
  - Honeycomb (3.0)
  - Ice Cream Sandwich (4.0), Jelly Bean (4.1), (4.2), (4.3)
  - Kit Kat (4.4.4) – the latest

The easiest way to install on Android is:

- Connect the device to the PC as any media device
- Open an explorer and select the device
- Copy the .apk file to Downloads folder
- On the device, select Settings
- Open from the device the Downloads folder
- Select the new added .apk file
- Install it

To see logs, the device needs to be set in developer debug mode.

On the device:

- Select Settings

- Select About phone

- Tap multiple time the build number until "You are a developer" confirm message is displayed

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To recognize the device, the usb device driver needs to be installed.

- Search on the internet the usb device driver and save it on your computer
- Select Manage Computer
- Select Device Manager
- Select Portable Devices – the device which needs driver is marked
- Select Install option for the device

- Connect the device to PC
- Start DDMS (\Android SDK path \sdk\tools)
- Select the device on the Name list
- The console logs can be saved, cleared, filtered

More methods, device specific

- Press and hold the power button and the Volume down button at the same time

- Press and hold the power and the home button at the same time

- Press and hold the power button for 1- to 2 seconds until the power options screen appears. If the option is available select 'Take a Screenshot'

- For OS below 2.3 – an application needs to be downloaded

Force close using the device Menu button:
- Select the Menu button
- Search for the application you want to close
- Remove it from the list by dragging it

Using Settings:
- Go to Settings
- Manage Apps or Apps
- Select the app you want to force stop or uninstall
- Confirm

Clear Cache :
Removes temporary storage for an application while it's running; e.g. images downloaded

Clear Data :
Removes any user data, databases; e.g. account settings

Tap

    To press or select a control or link (similar to mouse click)

Double tap

    Two quick taps, used to zoom in or out of content or an image

Flick

    Place a finger on the screen and quickly swipe it in the desired direction, used to scroll

Swipe

    Used to change pages

Drag

    Used to scroll, move the viewport, or pan

Pan

    Content sticks to finger and follows

Pinch

    Continuous zoom in or out

Touch and hold / long tap

    Used to display context menus

- Sign up / Login:
  - How easy is for the user to enter sensitive information
- Menu options:
  - Easy to be accessed and used
- Keys:
  - Scrolling
  - Text selection
  - Navigation
- Data Handling
  - Information display
  - Information deletion / unintended deletion
- Screen size
- Interruptions
  - Calls, SMS, MMS, video calls, other applications pop-ups
- Error messages
  - Clear, simple, actionable
- Resume

Localization Testing

- Content
  - Static or dynamic content like catalogs, search results
- Language
  - All pages are translated if the application is multiple languages supported
- Dates
  - Is the date January 1 or 1 January?
- Special characters
  - Different languages have different sets of characters
- Postal codes
  - In some countries postal codes / zipcode contain letters; e.g. UK W1A 1HQ , US 90125
- Phone numbers
  - Different formats for different countries, different prefixes
- Text direction
  - Some languages are written left to right, others are right to left
- Currency conversion
  - Highly important for internet retailers
- Tax calculation
  - VAT, sales tax and others vary from country to country

Device Orientation Testing

- See how 3rd party integrated functionalities (e.g.: notifications, social media messages) handle switching between landscape and portrait

- Rendering of menus, buttons, bars, text on the screen

- Scrolling

- Check how app behaves when the rotation is disabled

- Use the app with the option active
- Use the app with the option inactive
- Compare the app with Google maps if possible
- Take a trip to have different real locations
- Start and stop GPS from the device while the app is running
- Notifications on the app related to the place from where the user can change the location services permissions

Integration with:

- Facebook

- Twitter

- Instagram

- Dropbox, Drive

- Email clients

- …

- While the application is running
- While the application runs in background
- While the application is closed
- While the user is logged out
- After the application crashes
- No connection

Steps:

- Install the App Store / Google Play version

- Do some actions, like create entities, login, do some settings

- Update the application with the latest version (the testing version)

- Check the data integrity and persistence

- None
- Wi-Fi
- Wi-Fi with no internet connection
- Edge
- 3G
- 4G
- LTE

- Battery Life
- Connection Speed
- Connection Loss
- Carriers
- Heavy Data Usage
- Crashes

Mobile Web

- No installation required
- How does the site render in different browsers
- Requires an internet connection
- Load time is extremely important , for more than 60% users in less than 3 seconds

Native App

- The testing begins with the application installation and launch
- Consider the OS, OS version, screen size, custom themes, interruptions
- Not always requires an internet connection
- Testing on some mobile devices requires the access to a device ID

- Device fragmentation
- OS fragmentation
- Replicate different locations, carriers
- The configurations selection to test on

DeviceAnywhere:
   http://portal.keynotedeviceanywhere.com/

Advantages:
  - Devices lab
  - Different carriers

Disadvantages:
  - Price per license
  - Some devices are not always available
  - The connection is sometimes laggy