

Case scenario

A start-up specializing in making mobile applications (both Android and IOS) aims to equip itself with relevant hardware and software tools. The start-up contacts an IT consultancy company to explore its options. On behalf of an IT consultancy company, you are required to explore relevant computers (desktop/laptop/server) and software solutions/tools to aid the development process (e.g. design and prototyping, development, project management, testing) and summarize your findings in the report. While compiling the list, you have to differentiate between the needs of various development team members, i.e. developer, designer, project manager, tester and make appropriate choice of both hardware and software further supported with justification.

1. Introduction
2. Review of hardware and solutions
3. Justification and recommendations
4. Conclusion
5. References

Software Design and Prototyping Tools				
Name and price	OS/browsers support/	Short Description	Benefits	Limitations

Useful info

You need to consider 3 different software+hardware sets: 1) on premise, 2) cloud based, 3) hybrid. On-premise set should include details about hardware and software that will be used by the team, if the team decides to use the software that has to be installed on computers. Consider purchasing a server. Cloud-based set should include details about hardware and software that will be used by the team, if the team decides to mostly rely on cloud based solutions. Most likely they will need to use the cloud based server services. For cloud server services check out <https://cloud.google.com/solutions/mobile> https://aws.amazon.com/products/?pg=WICC-N&tile=learn_more and others and choose relevant services. Other applications that will be used by the team will also be mostly cloud based whenever possible. Hybrid set should be a set that includes the mixture of cloud tools and

software and hardware that needs to be purchased. Based on the findings (advantages and disadvantages) you should provide appropriate recommendations

<https://xbsoftware.com/blog/website-development-process-full-guide/>

<https://www.g2crowd.com/>

<https://alternativeto.net>

<https://www.capterra.com>

<https://www.codementor.io/@codementorteam/how-to-build-app-from-scratch-beginner-programmer-7z0atq56w>

<https://learnappmaking.com/how-to-make-an-app/>

Introduction

This report aims to overview and recommend suitable hardware and software solutions for team members of a new local IT company.

Start-up company Odyssey specializes in making mobile applications for Android and IOS. A variety of applications includes health-tracking utilities, meditations and yoga, workout and weight-loss programs. Odyssey team consists of 1 Project Manager, 2 UI/UX Designers, 1 Android Developers, 1 Apple Developer, and 1 QA Software Tester. While the company is relatively new and has a limited budget, it still owns a small office in the center of the Tashkent.

Review of hardware, software solutions and tools

Configuration details for computers

Some text, we will write it after we do tables

<https://bytescout.com/blog/laptops-for-programming.html> (laptops) (mac for ios dev, windows for others. laptops for designers, developers and testers. for proj. man - simple pc would be enough. those pc are applicable for cloud, on-premise and hybrid. which concrete - choose later. possible recommendations here - laptops = space economy, cheaper, easier to buy.

<https://www.racksolutions.com/news/data-center-optimization/blade-server-vs-rack-server/> server - rack server (model later) site -

<https://sysgen.ca/cloud-vs-in-house-servers/>(cloud and basic servers)

cloud solutions - slack/canva(for designers). link on slack -

<https://slack.com/intl/en-uz/pricing>

hybrid solutions -

<https://www.g2.com/categories/cloud-platform-as-a-service-paas/small-business>

First of all, startup company should acquire proper affordable computer hardware. Taking into consideration low budget prioritizing laptop over trasionary PC would be a better option. Modern laptops are light, comfortable and easy to transfer.

i5 for dev

i7 for designers

13-15 inch screen

No	Name and Price	OS	Descriptions	Benefits	Limitations
Developers					
1	ASUS VivoBook F510UA Price: 515\$ (Amazon)	Windows 10 Home 64-bit	Processor: 8th Generation Intel Core i5-8250U 1.6GHz, Quad-Core, Turbo Boost up to 3.4GHz Ram: 8GB DDR4 (Upgradable) Storage: 1TB HDD Graphics: Intel UHD Graphics 620 Display: 15.6-inch Full HD anti-glare display, 1920 x 1080 pixels Resolution Battery life: 5 hours Weight 1.7 kg	Low price Sleek design Large FHD display Both types of USB ports Strong performance Anti-glare display Comfortable keyboard Supports multitasking	Lacks touch support Keyboard not backlit Short battery life No SSD in test model

2	<p>Acer Aspire E 15</p> <p>Price: 599\$</p> <p>(Amazon)</p>	Windows 10 Home 64-bit	<p>Processor: Intel Core i5-8250U 1.6GHz Quad-Core, Turbo Boost up to 3.4 GHz</p> <p>Ram: 8 GB DDR4</p> <p>Storage: 256GB SSD</p> <p>Graphics: NVIDIA GeForce MX150 2GB DDR5 VRAM</p> <p>Display: 15.6-inch Full HD ComfyView LED-Backlit IPS Screen, 1920 x 1080 pixels Resolution</p> <p>Battery life: Up to 15 hours</p> <p>Weight 2.4kg</p>	<p>Low price</p> <p>Strong performance</p> <p>Lots of ports</p> <p>Good battery life</p> <p>Comfortable keyboard</p> <p>Big touchpad</p> <p>Great for Android Studio, Visual Studio or PostgreSQL</p>	<p>Bulky design</p> <p>Filled with bloatware</p>
3	<p>Apple MacBook Air</p> <p>Price: 1,034\$</p> <p>(Amazon)</p>	macOS	<p>Processor: 8th Generation Intel Core i5 1.6GHz, Dual-Core, Turbo Boost up to 3.6GHz</p> <p>Ram: 8GB DDR4</p> <p>Storage: 128GB SSD</p> <p>Graphics: Intel UHD Graphics 617</p> <p>Display: Retina display, 13.3-inch, 2,560 x 1,600 pixels Resolution</p> <p>Battery life: up to 11 hours</p> <p>Weight: 1.25kg</p>	<p>True Tone (adjusting screen colors to light temperature, great for long work hours)</p> <p>Good battery life</p> <p>Sleek design</p> <p>Multitasking</p> <p>Touch ID</p> <p>High-resolution display</p>	<p>Underpowered CPU</p> <p>Expensive</p> <p>Expensive to upgrade</p> <p>Limited storage capacity</p> <p>Only two Thunderbolt 3 (USB-C) ports</p>

4	<p>Lenovo ThinkPad E590</p> <p>Price: 687.11\$</p> <p>(Amazon)</p>	Windows 10 Pro 64	<p>Processor: AMD Ryzen 5 3500U 2.10 GHz, Quad-Core, Turbo Boost up to 3.70 GHz</p> <p>Ram: 8 GB DDR4 (Upgradable)</p> <p>Storage: 256GB SSD</p> <p>Graphics: AMD Radeon RX 550</p> <p>Display: 15.6-inch, Full HD 1920 x 1080 pixels Resolution</p> <p>Battery life: up to 10 hours</p> <p>Weight: 2.12 kg</p>	<p>Anti-glare display</p> <p>Windows 10 Pro (better security)</p> <p>1 Year Warranty</p> <p>Many ports and card slot</p> <p>Good battery life</p> <p>Strong build quality and performance</p> <p>Great for Android coding and graphically intensive work</p>	<p>Poor display color reproduction</p> <p>Inconvenient microSD card slot</p>
Designers					

1	<p>Acer Predator Helios 300</p> <p>Price: 1,100\$ (Amazon)</p>	Windows 10 Home 64-bit	<p>Processor: 9th Generation Intel Core i7-9750H, 6 Core, Turbo Boost up to 4.5GHz</p> <p>RAM: 16GB DDR4</p> <p>Storage: 256 GB SSD</p> <p>Graphics: NVIDIA GeForce GTX 1660 Ti 6GB GDDR6 VRAM</p> <p>Display: 15.6 inches Full HD, 1920 x 1080) Widescreen LED backlit IPS Display(144Hz Refresh Rate)</p> <p>Battery life: 3.5 hours</p> <p>Weight: 2.3 kg</p>	<p>Sleek design</p> <p>Strong build quality and performance</p> <p>Comfortable keyboard</p> <p>144Hz display</p> <p>Good port selection</p>	<p>Short battery life</p> <p>Limited storage capacity</p> <p>Poorly designed cooling system</p> <p>https://www.pcmag.com/reviews/acer-predator-helios-300-2019</p>
2	<p>HP Envy 13t</p> <p>Price: 1080\$ (Amazon)</p>	Windows 10 Home 64-bit	<p>Processor: 8th Generation Intel Core i7-8565U 1.8 GHz (Turbo Boost up to 4.6GHz) Whiskey Lake Processor</p> <p>RAM: 16GB DDR4</p> <p>Storage: 512 GB SSD</p> <p>Graphics: NVidia GeForce MX250 2GB DDR5 Graphics</p> <p>Display: 13.3-Inch 4K IPS, 1080 Resolution WLED-backlit Touchscreen Display</p> <p>Battery: Up to 12 hours</p> <p>Weight: 2.2kg</p>	<p>Good battery life</p> <p>Strong build quality and performance</p> <p>Touchpad</p> <p>Screen protection</p> <p>Sleek metal styling</p> <p>Comfortable keyboard</p> <p>Supports fast charging: 50% battery life for 45 minutes</p>	<p>No HDMI or Thunderbolt 3 port</p> <p>Bad audio output (better with HP Audio Boost)</p> <p>Inconsistent multi-core performance</p> <p>https://slickdeals.net/article/buying-guide/hp-envy-13t-laptop-review/</p>

3	HP Omen 15 Price: 793\$(Amazon)	Windows 10 Home 64-bit	Processor: 8th Generation Intel Core i7-8750H Processor, 6-Core, 2.2GHz up to 4.1GHz RAM: 12GB DDR4 Storage: 128SSD, 1TB SATA HDD Graphics: NVIDIA GeForce GTX 1050 Ti Display: 15.6-inch, 3840 x 2160 (4K) IPS with G-Sync Battery: Up to 6 hours Weight: 2.45 kg	Affordable Price Strong performance Sleek design Comfortable keyboard and touchpad Bright Display	Slow Hard Drive Average battery life Thermal throttling under stress
4	Lenovo ThinkPad E590 Price: 687.11\$ (Amazon)	Windows 10 Pro 64	Same Laptop suggested for Developers (see above section)		
Project Manager					
1	Lenovo ThinkPad E590 Price: 687.11\$ (Amazon)	Windows 10 Pro 64	Same Laptop suggested for Developers (see above section)		
2	Apple MacBook Air Price: 1,034\$ (Amazon)	macOS	Same Laptop suggested for Developers (see above section)		

3	<p>Lenovo - IdeaCentre 310S (Desktop)</p> <p>Price: 360\$</p> <p>LG - 24" IPS LED FHD FreeSync Monitor</p> <p>Price: 110\$</p> <p>Logitech - MK270 Wireless Keyboard and Mouse</p> <p>Price: 23\$</p> <p>Total Price: 493\$</p> <p>(Bestbuy.com)</p>	Windows 10 Home 64	<p>Processor: AMD A9-9425, 3.1 GHz</p> <p>RAM: 4GB DDR4 SDRAM</p> <p>Storage: 1 TB SATA HDD</p> <p>Graphics: AMD Radeon R5</p> <p>Display(Monitor): IPS, 1920 x 1080</p> <p>Dimensions (W x D x H): 11.69 x 3.54 x 13.54</p> <p>Ports: 2 x USB 3.0, 4 x USB 2.0, 2 x Headphone (Front / Rear), 2 x Microphone (Front / Rear), 1 x Audio Out (Rear)</p> <p>HDMI-Out</p> <p>VGA, 7-in-1 card reader</p>	<p>Compact</p> <p>Powerful, long-lasting performance</p> <p>Microsoft Office included</p> <p>Large amount of ports</p> <p>Low price</p> <p>DVD/CD burner</p> <p>Wireless network</p> <p>Easy set-up</p>	<p>HDD is slower than SSD</p> <p>Low storage capacity</p> <p>Depends on electricity supply</p> <p>Available to use only at the workplace</p> <p>Poor cooling system</p>
4	<p>Dell - Inspiron All-In-One</p> <p>Price: 650\$</p> <p>(Bestbuy.com)</p>	Windows 10 Home 64	<p>Processor:AMD A9-9425 3.1 gigahertz</p> <p>RAM: 8 GB DDR4</p> <p>Storage: 256 SSD</p> <p>Graphics: AMD Radeon R5</p> <p>Display(Monitor): 23.8-inch, LED Touch-Screen, 1920 x 1080 Resolution Full HD</p> <p>Dimensions(W x D x H): 21.6 x 1.6 x 14.1</p> <p>Ports: 2 x USB 2.0 Type A Ports, 1 HDMI Output, microphone and headphone jacks.</p>	<p>Advanced multitasking</p> <p>Many ports</p> <p>Bluetooth 4.1 interface syncs with compatible devices</p> <p>Sleek design</p> <p>Very compact</p> <p>Included Trend Micro Internet Security (3-Device) (6 Month Subscription) - Android Mac Windows iOS [Digital]</p>	<p>The bundled keyboard and mouse are low-quality and plasticky</p> <p>No USB connections on the front</p> <p>No USB 3.0 ports</p> <p>Not included a built-in DVD/CD drive.</p>
Software tester					
Laptops as for Developers					

Configuration details for server

No	Name and Price	Description	Benefits	Limitations
1	<p>Lenovo ThinkServerT S150</p> <p>Price: Approximately 500-700\$</p>	<p>Processor: Intel Xeon E3-1200 v6</p> <p>Ram: Up to 64GB</p> <p>Storage: 1 TB SATA, Up to 40TB HDD</p> <p>Bays: Four</p> <p>Connectivity: 8 x USB 3.0, serial, video, 2 x DisplayPort, audio, Gigabit Ethernet</p> <p>Dimensions (W x D x H): 17.5 x 37.5 x 43cm</p>	<p>Upgradable</p> <p>Compact and quiet</p> <p>Low-energy consumption</p>	<p>No hot swapping</p> <p>Slow base CPU</p>
2	<p>Dell PowerEdge T30</p> <p>Price: 469,99\$ (Amazon)</p>	<p>Processor: Intel Xeon E3-1225 v5</p> <p>Ram: Up to 64GB</p> <p>Storage: 1 TB SATA, up to six SATA HDD</p> <p>Graphics: Intel HD Graphics P530</p> <p>Bays: Four</p> <p>Connectivity: 10 x USB ports, HDMI, DisplayPort, VGA, serial, PS2, Gigabit Ethernet</p> <p>Dimensions (W x D x H): 17.5 x 43.5 x</p>	<p>Low price</p> <p>Compact and quiet</p> <p>Upgradable</p> <p>Low energy consumption</p> <p>Fast quad-core Xeon processor</p> <p>Room for six internal disks</p> <p>Fix USB 3.0 slots</p> <p>Perfect alternative to an office wo</p>	<p>Single Gigabit network port</p> <p>No hot-swapping of disks</p> <p>No Operating System</p>

		36cm		
	Synology DiskStation DS419slim Price: 353,99\$ (newegg)	Processor: Marvell Armada 385 88F6820 dual-core 1.33GHz Ram: 512MB Storage: Up to 20TB Bays: Four Connectivity: USB 3.0 port, two gigabit Ethernet ports that support link aggregation, and a power jack	Fast to setup Low price Mobile apps Up to 200 users Hot swapping Operating system - DiskStation Manager Cloud solution 24-hour backup device Light weight Compact and quiet Low energy consumption Lots of available apps Anywhere access with iOS and Android ready mobile apps	Only uses proprietary apps Drives not included Only accepts 2.5-inch drives Limited storage capacity

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Software solutions

On premises oriented

on premises oriented

https://firebase.google.com/products/crashlytics?utm_source=crashlytics_marketing&utm_medium=redirect&utm_campaign=crashlytics_redirect

Links

Google Docs:

Github: <https://github.com/00008402/FIT.CW1.8402.8446>

Reference List

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<https://www.notebookcheck.net/HP-Envy-13-Review-A-well-rounded-subnotebook-with-a-good-number-of-features.433478.0.html#toc-verdict>

<https://www.notebookcheck.net/Acer-Predator-Helios-300-Laptop-Review-A-modern-gaming-laptop-with-a-Turing-GPU.441292.0.html>

<https://www.notebookcheck.net/Lenovo-ThinkPad-E590-i7-8565U-UHD-620-FHD-Laptop-Review.414821.0.html>

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<https://www.cloudwards.net/best-small-business-server/>

<https://www.pcmag.com/reviews/synology-diskstation-ds419slim>

<https://www.storagereview.com/review/synology-diskstation-ds419slim-nas-review>