Stremnev A.Y., 2018

## **Operation system**

software complex to perform following tasks:

- hardware support
- software installation and management
- file system maintenance
- hardware and software interfaces support
- user interface support
- distribution of computing resources

## File manager

software to perform following tasks in file system:

- searching objects (files, folders, shortcuts)
- navigation
- opening objects
- creating objects

- copying objects
- moving objects
- deleting objects

# OS info, CPU info, RAM info

## Start > RMB > System

Event Viewer	Settings		
System	<b>命</b> Home	About	
Device Manager		Virus & Thr	reat Protection
Network Connections	Find a setting	✓ Sirewall & N	Network Protection
	System	Device peri	formance & Health
lisk Management			
omputer Management	L Display		
/indows PowerShell	<b>丸</b> 沙 Sound	Account pr	otection
		Device secu	urity
ndows PowerShell (Admin)	□ Notifications & actions	See details in W	/indows Defender
Manager	J Focus assist		
ettings	() Power & sleep	Device spec	ifications
e Explorer	Battery	Device name	DESKTOP-OFGSJGO
earch	_ buttery	Processor	Intel(R) Core(TM) i5-7200U CPU @ 2.50GHz 2.71
	📼 Storage		GHz
in		Installed RAM	8.00 GB (7.89 GB usable)
	Tablet mode	Device ID	D36E83FC-FC7B-47A7-B39D-2B0041804CF7
hut down or sign out 🧼		Product ID	00328-00098-44710-AA367
esktop		System type	64-bit operating system, x64-based processor
	Projecting to this PC	Pen and touch	No pen or touch input is available for this display

X

# **Display info/parameters**

# Start > RMB > System > Display

Event Viewer	Settings	
System	命 Home	Display
Device Manager		Display
Network Connections	Find a setting	Brightness and color
Disk Management	System	Change brightness
Computer Management	🖵 Display	Night light
Windows PowerShell	(小) Sound	• Off
Windows PowerShell (Admin)	Notifications & actions	Night light settings
Task Manager	J Focus assist	Scale and layout
Settings		Change the size of text apps, and other items
File Explorer	O Power & sleep	125% (Percommended)
Search	🖙 Battery	Advanced scaling settings
Run	📼 Storage	Resolution
Shut down or sign out	교 Tablet mode	1920 × 1080 (Recommended) $\vee$
Desktop	員: Multitasking	Orientation
		Landscape ~
	Projecting to this PC	

# **Display adapter (graphic card) info/parameters**

#### Start > RMB > System > Display > Advanced display settings

Fuent Viewer	Settings	Multiple displays	
System	<b></b> Home	Connect to a wireless displa	V
Device manager			, 
ork Connections	Find a setting	Older displays might not alv Detect to try to connect to t	vays connect automatically. Select hem.
Management	System	Detect	
nputer Management	🖵 Display		
dows PowerShell	다) Sound	Advanced display settings	
'indows PowerShell (Admin)			
ask Manager		Display 1: Connected	to Intel(R) HD Graphics 620
ttings		Desktop resolution	1920 × 1080
e Explorer		Active signal resolution	1920 × 1080
Jearch		Refresh rate (Hz)	60 Hz
		Bit depth	8-bit
		Color format	RGB
Shut down or sign out		Color space	Standard dynamic range (SDR)
Desktop		Display adapter propert	es for Display 1

# Sound info/parameters

# Start > RMB > System > Sound

Event Viewer	Se
System	ណ៍
Device Manager	Г
Network Connections	L
Disk Management	Sj
Computer Management	Ģ
Windows PowerShell	¢
Windows PowerShell (Admin)	L,
Task Manager	2
Settings	d
File Explorer	Ċ
Search	
Run	
Shut down or sign out	Ę
Desktop	
P Ħ 🔁 🔚 🌣 (	ē

Setti	ngs
ŵ	Home
Fi	nd a setting
Sys	tem
Ţ	Display
口")	Sound
$\Box$	Notifications & actions
D	Focus assist
Ċ	Power & sleep
	Battery
œ	Storage
æ	Tablet mode
Ħ	Multitasking
Ð	Projecting to this PC

#### Sound

Choose your output device

Some apps are using custom output settings. You can personalize these in app volume and device preferences below.

#### Device properties

#### Volume



#### Input

Choose your input device

Microphone (Realtek High Definiti...  $\, \smallsetminus \,$ 

Some apps are using custom input settings. You can personalize these in app volume and device preferences below.

#### Device properties

## **Device** info

## Start > RMB > Device Manager

Event Viewer
System Device Manager
Network Connections Disk Management Computer Management
Windows PowerShell Windows PowerShell (Admin) Task Manager
Settings File Explorer
Search Run
Shut down or sign out

🛃 Devic	e Manager	6. <del></del> 3		×
File Act	ion <u>V</u> iew <u>H</u> elp			
<	II 🛛 II 💭			
~ 🛃 DE	SKTOP-OFGSJGO			^
~ 1	Audio inputs and outputs			
	🚇 Microphone (Realtek High Defir	nition A	udio)	
	🖣 Speakers (Realtek High Definitio	n Audi	0)	
> 😼	Batteries			
<b>- 8</b>	Bluetooth			
> @	Cameras			
> 💻	Computer			
× 💼	Disk drives			
	HFS128G39TND-N210A			
	- HGST HTS541010B7E610			
	🕳 Kingston DataTraveler 3.0 USB D	)evice		
× 🗔	Display adapters			
	Intel(R) HD Graphics 620			
	🔙 NVIDIA GeForce MX150			
× 🚇	DVD/CD-ROM drives			
	HL-DT-ST DVDRAM GUE1N			
>	Human Interface Devices			
> 📷	IDE ATA/ATAPI controllers			
> 🛴	Intel(R) Dynamic Platform and Ther	mal Fra	mework	
>	Keyboards			
> 🕛	Mice and other pointing devices			
>	Monitors			
> 📮	Network adapters			
>	Portable Devices			
> 🖻	Print queues			
>	Processors			~

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# **Disk info**

## Start > RMB > Disk Management

System	📅 Disk Managemen	t						_		×
Device Manager	<u>File</u> <u>A</u> ction <u>V</u> iew	Help								
		I 🏸 👗 🗹			,	,				
Network Connections	Volume	Layout	Type F	ile System	Status	Capacity	Free Sp	% Free		
Disk Management	<ul> <li>(C:)</li> <li>(Disk 0 partition 1)</li> <li>(Disk 0 partition 2)</li> </ul>	Simple Simple Simple	Basic N Basic Basic	ITFS	Healthy (B Healthy (E Healthy (P	118.70 GB 62 MB 1 MB	71.06 GB 62 MB 1 MB	60 % 100 % 100 %		
Computer Management	= (Disk 0 partition 4)	Simple	Basic		Healthy (P	4.00 GB	4.00 GB	100 %		
compater management	- DATA (D:)	Simple	Basic N	ITFS	Healthy (P	927.45 GB	902.87 GB	97 %		
Windows PowerShell	ESD-USB (F:)	Simple	Basic F.	AT32	Healthy (A	28.83 GB	3.42 GB	12 %		
Task Manager Settings File Explorer Search	<b>Disk 0</b> Basic 931.51 GB Online	52 MB Healthy (EFI Sy	DATA (D: 927.45 GB Healthy (Pr	) NTFS rimary Partitic	on)		4.00 GB Healthy (F	Primary Parti	tion)	
Run Shut down or sign out	<b>Disk 1</b> Basic 119.24 GB Online	<b>System Reserve</b> 549 MB NTFS Healthy (System	<b>ed</b> n, Active, Primary	(C:) 118.70 GB Healthy (E	8 NTFS 3oot, Page File,	Crash Dump, Pri	mary Partition			
	Unallocated Pri	mary partition								
		partition								_

## General info / Mouse, Keyboard, ...

## Start > RMB > Settings > Devices

4	Task Manager	旦	System Display, sound, notifications, power		Device Bluetoo	<b>es</b> oth, printers, mouse		<b>Phone</b> Link your Android, iPhone
	Settings		Network & Internet Wi-Fi, airplane mode, VPN	<b>É</b>	Perso Backgr	nalization ound, lock screen, colors		Apps Uninstall, defaults, optional
	File Explorer	8	Accounts	。 A字	Time Speech	& Language	$\bigotimes$	Game bar, DVR, broadcasting
	Run		work, family		Specen	, region, date		Game Mode
	Shut down or sign out	ſ	分 Home Find a setting		٩	Select your primary	/ button	
	Desktop	C	Devices		_	Left $\checkmark$		
•	♀ ⊑i Ҽ ♀		Bluetooth & other devices			Roll the mouse whe	eel to scro $\cdot$ a time $ \smallsetminus $	1
		Ę	Printers & scanners					1
			) Mouse			Choose how many	lines to so	croll each time
		E	Touchpad			Scroll inactive wind	lows wher	I hover over them
			Typing			On Related setting	js	
		ci	Pen & Windows Ink			Additional mouse of	options	

# **Applications info**

Apps and Features	Start > RMR	> Anns & Fostur	96
Mobility Center		> Apps & l'eatur	53
wer Options			
nt Viewer	Settings		;
	命 Home	Apps & features	
Manager	Find a setting	Apps & features	
Connections			
nagement	Apps	Manage optional features	
er Management	E Apps & features	Manage app execution aliases	
PowerShell	Er Default apps	Search, sort, and filter by drive. If you would like to uninstal move an app, select it from the list.	lor
owerShell (Admin)	때 <u>·</u> Offline maps	Search this list	
ger	Apps for websites	Sort by: Name $\checkmark$ Filter by: All drives $\checkmark$	
	□ Video playback	7-Zip 18.05 (x64) 4 8/1	4.93 MB 18/2018
brer	☐ Startup	Akamai NetSession Interface	18/2018
		Alarms & Clock	16.0 KB
/n or sign out		Microsoft Corporation 9/1	12/2018
		App Installer           Microsoft Corporation         8/1	<b>16.0 KB</b> 16/2018
e 🖬 🌣		Autodesk Certificate Package (x64) - 7.1.4	504 KB

Fewer details

## **Processes info/management**

## Start > RMB > Task Manager

Device Manager Network Connections Disk Management Computer Management Windows PowerShell Windows PowerShell (Admin) Task Manager Settings File Explorer Search Run Shut down or sign out	System	
Network Connections   Disk Management   Computer Management   Windows PowerShell   Windows PowerShell (Admin)   Task Manager   Settings   File Explorer   Search   Run   Shut down or sign out   Desktop	Device Manager	
Disk Management Computer Management Windows PowerShell Windows PowerShell (Admin) Task Manager Settings File Explorer Search Run Shut down or sign out	Network Connections	
Computer Management Windows PowerShell Windows PowerShell (Admin) Task Manager Settings File Explorer Search Run Shut down or sign out	Disk Management	
Windows PowerShell Windows PowerShell (Admin) Task Manager Settings File Explorer Search Run Shut down or sign out	Computer Management	
Windows PowerShell (Admin)   Task Manager   Settings   File Explorer   Search   Run   Shut down or sign out   Desktop	Windows PowerShell	
Task Manager   Settings   File Explorer   Search   Run   Shut down or sign out   Shut down or sign out   Desktop	Windows PowerShell (Admin)	
Settings File Explorer Search Run Shut down or sign out Desktop	Task Manager	
File Explorer Search Run Shut down or sign out > Desktop	Settings	,
Search Run Shut down or sign out > Desktop	File Explorer	
Run Shut down or sign out Desktop	Search	
Shut down or sign out > Desktop	Run	
Desktop		
	Shut down or sign out	
	Shut down or sign out >	

Processes	Performance	App history	Startup	Users	Details	Services				
	^						8%	32%	0%	0
Name			St	atus			CPU	Memory	Disk	Netw
Apps (6	5)									
> 🍒 м	icrosoft Manag	gement Conso	ole				0%	2.6 MB	0 MB/s	0 Mt
> 💽 M	icrosoft Power	Point (32 bit)	(2)				0%	33.1 MB	0 MB/s	0 MI
> 👿 M	icrosoft Word	(32 bit)					0%	44.4 MB	0 MB/s	0 MI
> 💡 Pa	aint 3D (2)						3.3%	343.3 MB	0.1 MB/s	0 MI
> 🙀 Ta	isk Manager						0.8%	20.9 MB	0 MB/s	0 MI
> 🦰 W	indows Explor	er (3)					0.1%	50.6 MB	0 MB/s	0 MI
Backgro	ound proce	esses (54)								
> 🏥 A	ctivation Licen	sing Service					0%	1.6 MB	0 MB/s	0 MI
Ġ Al	kamai NetSess	ion Client (32	bit)				0%	5.9 MB	0 MB/s	0 MI
🔂 🧊	kamai NetSess	ion Client (32	bit)				0%	2.2 MB	0 MB/s	0 MI
> 📧 ar	nijm.exe						0%	1.9 MB	0 MB/s	0 MI
	polication Fran	ne Host					0%	8.2 MB	0 MB/c	0.04

End task

## **Starting of Windows Explorer. Interface**



1 – Quick access toolbar; 2 – Header; 3 – Tabs; 4 – Groups; 5 – Commands; 6 – Search bar; 7 – Working area; 8 – Adress bar; 9 – Navigation tree view (structure); 10 – Status bar

## **General operations in Windows Explorer**

## Working area > RMB > ...

## File/Folder > RMB > ...

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D	rive To	ols DATA (D:)				_		$\times$				
	Manag	e						~ ?				
DATA	A (D:)	>	~	Ü	Search DATA	(D:)		Q				
Nam	e	^	Da	ate m	nodified	Туре		Si				
1	1710	View	>	471	2010 2 50 014							
	DIST My	Sort by	by >		🧎 Folder							
		Group by	>	~	Shortcut							
II. F	Prog	Refresh		Bitmap image								
l F	Prog	Customize this folder		2	Contact							
t t	imp vivo	Paste	Paste			Документ Microsoft Word						
1	Wind	Paste shortcut										
		Undo Rename	Ctrl+Z		Text Docume	nt	ublisher					
		Give access to	>		Лист Microso	oft Excel						
		New	>		Compressed	(zipped)	Folder					
		Properties		Γ								

N	Open	
DATA (D:)	Open in new window	
Name	Pin to Quick access	>
171018	CRC SHA	Ś
<ul> <li>DIST</li> <li>My</li> <li>Program_Files_</li> <li>Program_Files_</li> <li>tmp</li> <li>vivo_restore_17</li> </ul>	Give access to Restore previous versions Scan selected items for viruses Include in library Pin to Start	>
Windows_fold	Send to Cut Copy Create shortcut Delete	>
¢	Rename Properties	

## **Sorting in Windows Explorer**

## View > Layout > Details ... > Column Headers

# View > Current View > > Sort by ...

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📕   🛃 📕 =   tmp	_						- 🗆	×
File Home Share	View	_	_					~ ?
Navigation Details pane	Image icons       Image icons         Small icons       Image icons         Image icons       Image icons	So by	☐ Group by ▼ Ĩ Add columns ▼ Ħ Size all columns t	<ul> <li>Item check boxes</li> <li>File name extension</li> <li>o fit</li> <li>Hidden items</li> </ul>	ons Hide selected items	Options		
Panes	Layout	•	Name	Snow/I	nide			
← → × ↑ 🖡 > TI	nis PC > DATA (D:) > tmp >		Date modified		~ Ū	Search tmp		Ą
171018	^ Name		Type Size	Date modified	Туре		Size	
lekc_ino	📕 img		Date created	10/2/2018 8:02 PM	File folder			
📕 p_151018	p_021018		Authors	10/2/2018 8:45 PM	File folder			
📜 p_161018	📙 p_151018		Tags	10/16/2018 7:09 PM	File folder			
OneDrive	📕 p_161018		Title	10/17/2018 2:24 PM	File folder			
	📙 p_180918	~	Ascending	9/18/2018 9:40 PM	File folder			
🧢 This PC	📕 Выкл_W10		Descending	8/24/2018 8:59 PM	File folder			
👌 3D Objects	230818		Choose columns.	8/23/2018 8:18 PM	Text Documen	t	28 KB	
🔚 Desktop	🞼 Flower_G.bundle-win64		choose columnshi	9/12/2018 9:24 PM	Windows Insta	IIer Package	1,464 KB	
Documents	mask_scena_2018-Aug-24_06-13-07PM-000_Cus	tomiz	edView2995120_png	8/24/2018 9:21 PM	PNG File		618 KB	

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## **Search in Windows Explorer**

# Search Bar > ... > Search Tools – Search Tab > ...



## **Options of Windows Explorer**

### View > Options > Change folder and search options...

View Medium icons Small icons List Details Content Layout Cu	Group by T Iter Add columns T File Size all columns to fit I Hic urrent view	em check boxes le name extensions Hide selected items Show/hide Items Change folder and search options	
Folder Options	×	Folder Options	×
General View Search		General View Search	
Open File Explorer to: Quick access Browse folders Open each folder in the same window Open each folder in its own window	~	Folder views       You can apply this view (such as Details or Icons) to all folders of this type.         Apply to Folders       Reset Folders	
<ul> <li>Click items as follows</li> <li>Single-click to open an item (point to select)</li> <li>Underline icon titles consistent with my browser</li> <li>Underline icon titles only when I point at them</li> <li>Double-click to open an item (single-click to select)</li> </ul>		Advanced settings:	
Privacy         Show recently used files in Quick access         Show frequently used folders in Quick access         Clear File Explorer history		<ul> <li>Show encrypted or compressed NTFS files in color</li> <li>Show pop-up description for folder and desktop items</li> <li>Show preview handlers in preview pane</li> <li>Show status bar</li> <li>Show sync provider notifications</li> <li>Use check boxes to select items</li> <li>Use Sharing Wizard (Recommended)</li> </ul>	<b>y</b>

#### 4. CALCULATOR

## Win + R > calc or Start > Calculator

Calculator				- Calculator
≡ Sta	andard			History Memory
			0	Calculator       Image: Calculator       Image: Calculator       Image: Calculator       Image: Calculator
MC	MR N	И+ М-	MS	🔏 Scientific
%	$\checkmark$	<i>x</i> <sup>2</sup>	1⁄x	
CE	C	$\langle \times  $	÷	Date Calculation
	-	-		Converter
7	8	9	×	S Currency
4	5	6	—	🕸 Volume
1	2	3	+	🖉 Length
±	0	•	=	I About

# 4. CALCULATOR

Calculator											—		×
≡ Scie	entific								History	Memory			
									_				
								0	There's no	thing saved in	memor	y	
DEG	НҮР	F-E											
MC	MR	M+	M-	MS									
<i>x</i> <sup>2</sup>	$x^{y}$	sin	cos	tan	CE	С	$\langle X \rangle$	<u>.</u>					
<i>x</i> <sup>3</sup>	<i>¥</i> ∕x	sin <sup>-1</sup>	COS <sup>-1</sup>	tan <sup>−1</sup>	7	8	9	×					
						_	-						
$\checkmark$	10 <sup>x</sup>	log	Exp	Mod	4	5	6	_					
1/x	e <sup>x</sup>	In	dms	deg	1	2	3	+					
$\uparrow$	π	n!	(	)	±	0	•	=					

## **4. CALCULATOR**

M+

MR

$$\cos^{3}\left(\frac{\sqrt[4]{4!-e^{2}}}{\arcsin(0,9)}\right) + \frac{\pi}{\log_{4}15}$$

4

log

log

DEG	нүр	F-E						
MC	MR	M+	M-	MS				
<i>x</i> <sup>2</sup>	<i>x<sup>y</sup></i>	sin	COS	tan	CE	C	$\bigotimes$	÷
<i>x</i> <sup>3</sup>	₹∕/x	sin <sup>-1</sup>	cos <sup>-1</sup>	tan <sup>-1</sup>	7	8	9	×
$\checkmark$	10 <sup><i>x</i></sup>	log	Exp	Mod	4	5	6	-
1⁄x	e <sup>x</sup>	In	dms	deg	1	2	3	+
$\uparrow$	π	n!	(	)	±	0	•	=
4	n!	-	2	e*		•	x	4
9	RAD	sin <sup>-1</sup>	=	cos	x	3 N	IS	π

Result: 1.596

0

x.

÷