

## java from scratch Knowledge Base

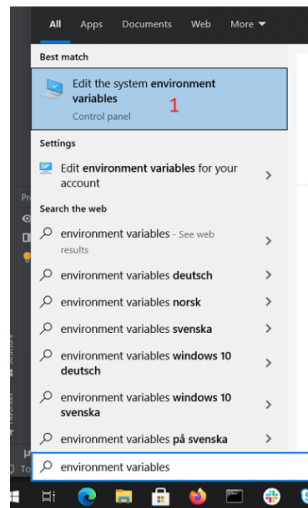
- ✓ Welcome
- ✓ Mastering Agile and Scrum: Video Training Series
- ✓ Program
- ✓ Introduction
- ✓ The architecture of an operating system
- ✓ The structure of files and directories
- Navigating through directories
- **Environment variables**
- Extracting archives
- Installing the software
- Monitoring the usage of system resources
- Ending – control questions
- Software Installations
- IntelliJ EduTools – installation
- Introduction
- A brief history of Java
- First program
- Types of data
- Operators
- Conditional statements
- Loops

| java from scratch Knowledge Base

# Environment variables

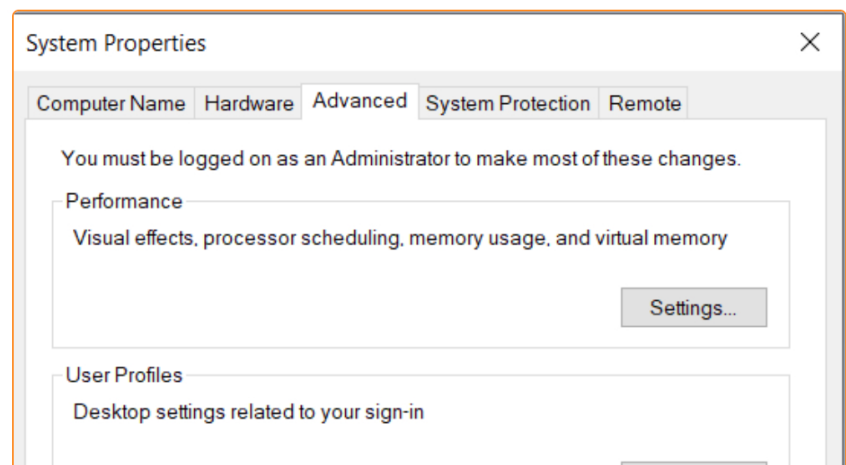
Operating systems often contain a lot of application programs that require different software to run, e.g. a programming language or an additional library. System variables have been created to speed up communication between software and to speed up the way a user runs software. A variable in its definition is a certain object in which we can store a value. For instance in  $X = 10$ , the variable  $X$  has a value of 10. In the case of operating systems, there are defined (environment) variables that contain the necessary information for the proper operation of the system and the software installed on it .

## Environment Variables on Windows

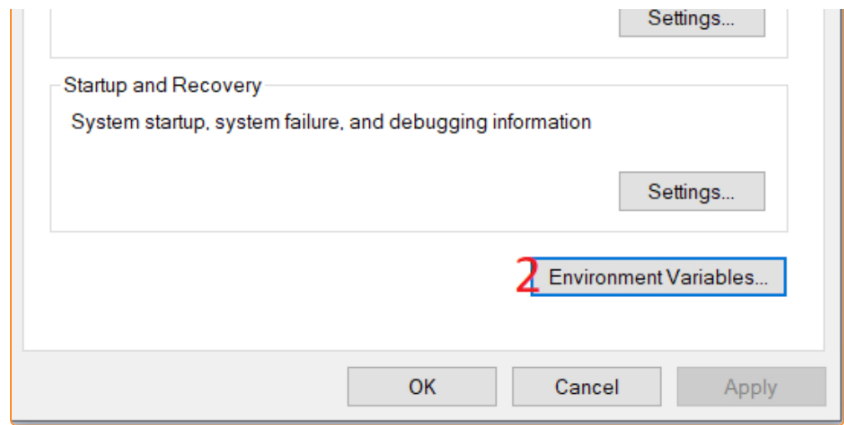


Windows environment variables can be viewed using the graphical user interface. For this purpose, after expanding the start menu, enter the password "Environment Variables". And select the environment variables edit window (1).

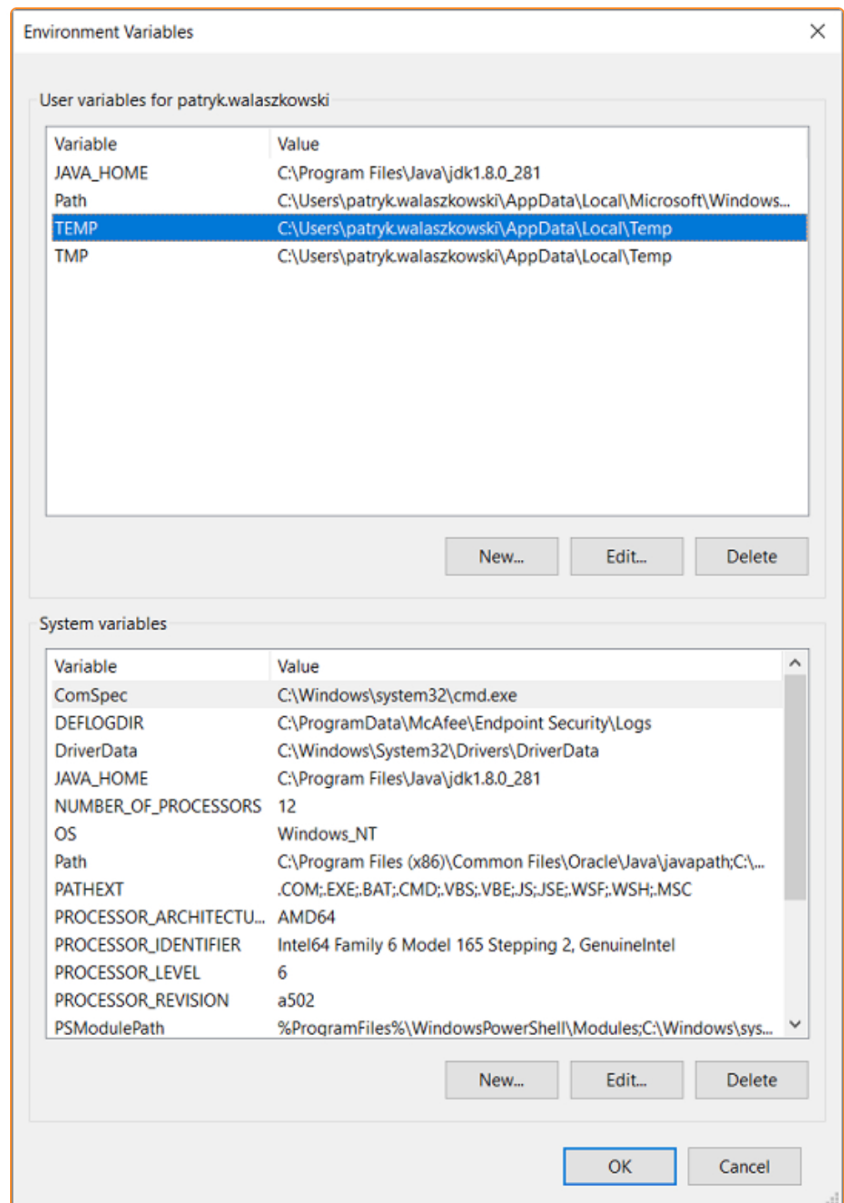
Then go to the "Environment Variables" tab (2).



- ☐ Arrays
- ☐ Object-oriented programming
- ☐ Conclusion
- ☐ Assignments
- ☒ Basics of GIT – video training
- ☒ HTTP basics – video training
- ☐ Design patterns and good practices video course
- ☐ Pework Primer: Essential Concepts in Programming
- ☐ Cybersecurity Essentials: Must-Watch Training Materials
- ☐ Java Developer – introduction
- ☐ Java Fundamentals – coursebook
- ☐ Java fundamentals slides
- ☐ Java fundamentals tasks
- ☒ Test 1st attempt | after the block: Java fundamentals
- ☐ Test 2nd attempt | after the block: Java fundamentals
- ☐ GIT version control system coursebook
- ☐ Java – Fundamentals: Coding slides
- ☐ Java fundamentals tasks
- ☐ Software Testing slides
- ☐ Software Testing Coursebook
- ☐ Software Testing tasks
- ☐ Test 1st attempt | after the block: Software testing
- ☐ Test 2nd attempt | after the block: Software testing
- ☒ Java – Advanced Features coursebook



A window will open where we can see all environment variables and create a new or edit an existing environment variable. Environment variables are divided into variables for the currently logged in user and system-wide variables.



Examples of Windows environment variables:

- %USERNAME% – name of the current user,
- %HOMEPATH% – name of the user's home directory,

- ☐ Java – Advanced Features slides
- ☐ Java – Advanced Features tasks
- ☐ Test 1st attempt | after the block: Java Advanced Features
- ☐ Test 2nd attempt | after the block: Java Advanced Features
- ☐ Java – Advanced Features: Coding slides
- ☐ Java – Advanced Features: Coding tasks
- ☒ Test 1st attempt | after the block: Java Advanced Features coding
- ☐ Test 2nd attempt | after the block: Java Advanced Features coding
- ☐ Data bases SQL coursebook
- ☐ Databases SQL slides
- ☐ Databases – SQL tasks
- ☐ Coursebook: JDBC i Hiberate
- ☐ Excercises: JDBC & Hibernate
- ☐ Test 1st attempt | after the block: JDBC
- ☐ Test 2nd attempt | after the block: JDBC
- ☐ Design patterns and good practices
- ☐ Design patterns and good practices slides
- ☐ Design Patterns & Good Practices tasks
- ☐ Practical project coursebook
- ☐ Practical project slides
- ☐ HTML, CSS, JAVASCRIPT Coursebook
- ☐ HTML, CSS, JAVASCRIPT slides
- ☐ HTML. CSS. JavaScript tasks

- %COMPUTERNAME% – the computer name.

A characteristic feature of environment variables in Windows are the %% characters. We put the variable name between them. Going back to the example of X=10 – for Windows we would write this situation as % X% = 10. The value stored in the environment variables can be displayed in the command line with the command `echo% VARNAME`.

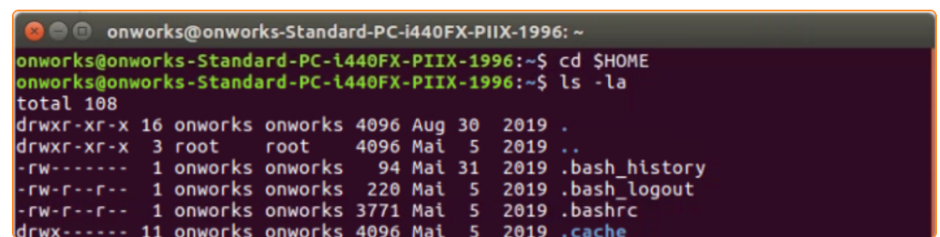
```
C:\Users\john.doe>echo %COMPUTERNAME%
MY_LAPTOP
```

We can use the command line to set the environment variable by calling the **SET** command. Note – this setting of the environment variable is active only when using the command line. When we close or restart the terminal, the variable will have to be set again.

```
C:\Users\john.doe>set MY_VARIABLE="TEST"
C:\Users\john.doe>echo %MY_VARIABLE%
"TEST"
```

## Linux/macOS Environment Variables

The purpose of environment variables on Linux/macOS is identical to Windows. The big difference in Unix systems is the way environment variables are defined and stored. On Unix-derived systems, environment variables are stored in a special `.bashrc` hidden file. By default, this file is located in the user's home directory, which is accessed by the `$HOME` environment variable



```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cd $HOME
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls -la
total 108
drwxr-xr-x 16 onworks onworks 4096 Aug 30 2019 .
drwxr-xr-x  3 root    root    4096 Mai  5 2019 ..
-rw-r--r--  1 onworks onworks  94 Mai 31 2019 .bash_history
-rw-r--r--  1 onworks onworks 220 Mai  5 2019 .bash_logout
-rw-r--r--  1 onworks onworks 3771 Mai  5 2019 .bashrc
drwx----- 11 onworks onworks 4096 Mai  5 2019 .cache
```

The file can also be opened in any text editor. It is not recommended to edit the file without admin knowledge as it may crash your system.

Examples of environment variables on Linux / macOS are:

- \$HOME – path to your home directory
- \$HOSTNAME – the computer name
- \$OSTYPE – the type of operating system

An important difference from the Windows family is that the variables contain a dollar sign and the variable name. Returning to the example of X = 10 on Linux we would write this situation as \$ X = 10. The value stored in the environment variables can be displayed in the terminal with the command `echo $ VARNAME`.

- ☐ Test 1st attempt | after the block: HTML,CSS,JS
- ☐ Test 2nd attempt | after the block: HTML,CSS,JS
- ☐ Frontend Technologies coursebook
- ☐ Frontend technologies slides
- ☐ Frontend Technologies tasks
- ☐ Test 1st attempt | after the block: FRONTEND TECHNOLOGIES (ANGULAR)
- ☐ Test 2nd attempt | after Frontend technologies
- ☐ Spring coursebook
- ☐ Spring slides
- ☐ Spring tasks

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ echo $HOSTNAME  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

We can use the command line to set the environment variable by calling the command `export`. Note – such setting of the environment variable is active only when using the terminal. When we close or restart the terminal, the variable will have to be set again. If you want to set the environment variable permanently, edit the `.bashrc` file by adding a new line with the `export` command, the name and value of the variable.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ export MY_VARIABLE="TEST"  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ echo $MY_VARIABLE  
TEST  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

**Complete Lesson**