PRACTICAL No 3

Input Devices

Input Device

KEYBOARD

Keyboard Operations

- Besides working with the mouse also keyboard operation is supported.

- The available keyboard shortcuts are grouped according to the application areas.

Common Keyboard Operations

Shortcuts	Action
`Tab`	**Focusses the next control.**
`Shift + Tab`	**Focusses the previous control.**
`Enter`	**Executes the corresponding action on the selected element (e.g. press a button or execute a menu command and open an object).**
`Space Bar`	**Activates the selected element.**
`Menu Key` or `Shift + F10`	**Opens the context menu of the selected element (if existing).**
`Left, Right, Up, Down Home, End`	**Navigates in symbol bars, object lists and structures.** **Note: In a search result list, press the `End` key to select the last object currently visible. If there are further results, the reload is started automatically.**

Global Navigation

- All controls are located in tab order. This means you can move from one control to other forward and back.

Shortcuts	Action
Tab	Navigates to next menu command.
Shift + Tab	Navigates to previous menu command.
Ctrl + F6, Ctrl + Shift + F6	Navigates circular between the areas: •Home (logo) •search field •tool menu •actions •right tool area (if opened) •content area
Alt + 0	Activates to "Support" button.
Alt + 1	Navigates to "Home".
Alt + 2	Navigates to the object list in the content area.
Alt + 3	Navigates to the actions.
Alt + 4	Navigates in the search field.
Alt + 5	Navigates in the opened context-independent tool or in the tool selection if no context-independent tool is opened.
Alt + 6	Navigates in the "Options" tool bar.
Alt + 9	Activates to "Quick Access" button.

Top Bar

- In the top bar, the following shortcuts are available.

Shortcuts	Action
Right, Down	Navigates to next menu command. If the last menu command is selected, it navigates to the first one.
Left, Up	Navigates back. If the first menu command is selected, it navigates to the last one.
End	Navigates to first menu command.
Home	Navigates to last menu command.
Enter or Space Bar	Activates the selected element.

Menus

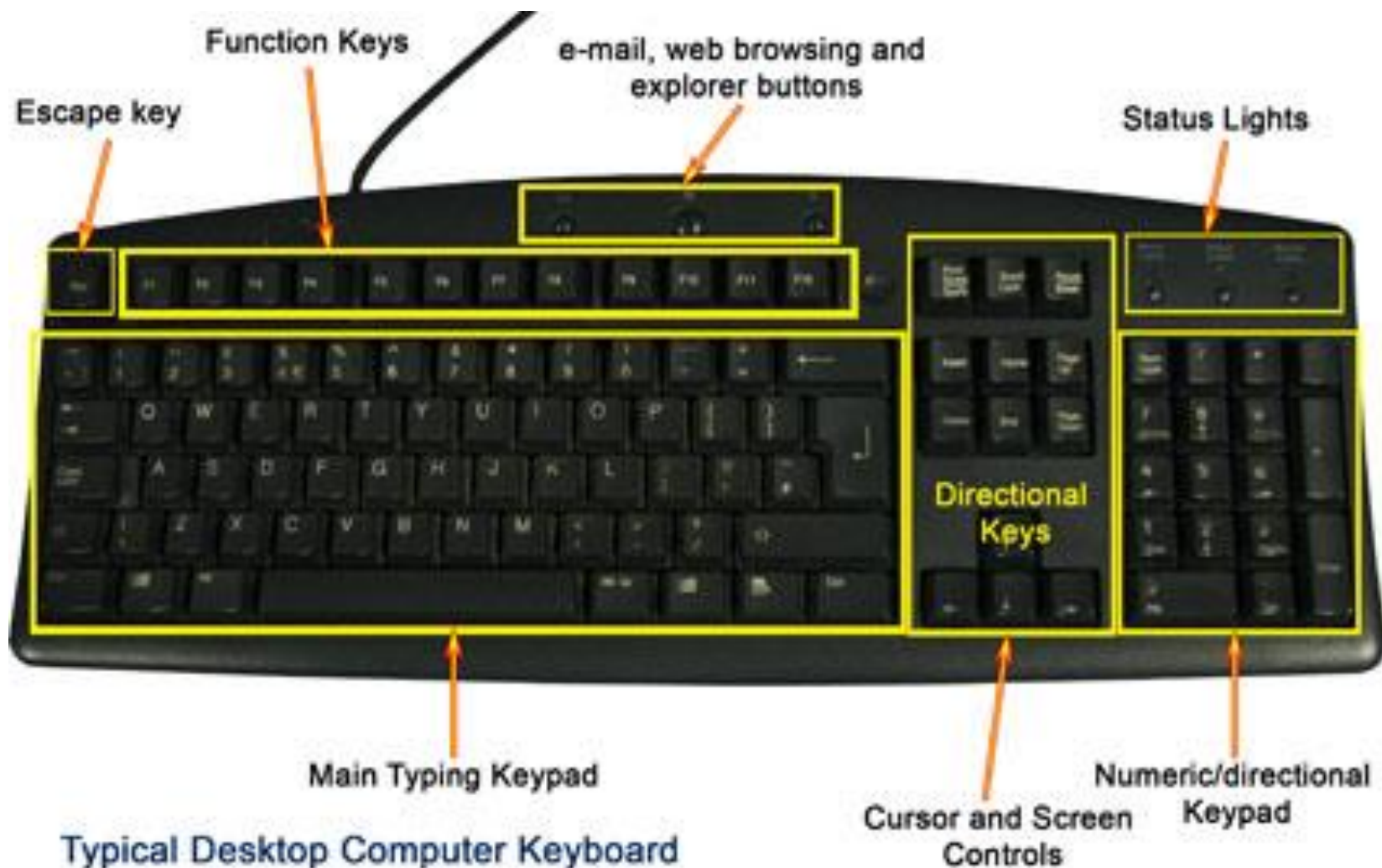| Shortcuts	Action
Down	In the menu bar: Opens the selected menu and selects the first entry. In an open menu: Select the previous entry. If the last first is selected, it steps to the last entry.
Up	In the menu bar: Opens the selected menu and selects the first entry. In an open menu: Select the next entry. If the last entry is selected, it steps to the first entry.
Right	In the menu bar: Selects the next entry. If the last entry is selected, it steps to the first entry. In an open menu: Opens the submenu if selected. Otherwise opens the next menu and selects the first entry.
Left	In the menu bar: Selects the previous entry. If the first entry is selected, it steps to the last entry. In an open menu: Opens the previous menu and selects the first entry. In a submenu: Closes the submenu and selects the first entry in the menu.
Enter or Space Bar	Enter or Space Bar executes the selected menu command or the assigned submenu is opened.
Esc	Esc closes the opened submenus and/or menus hierarchically. On top-level either nothing happens (actions, tools) or it will navigated in the content area (menu of the object list)

Actions

Shortcuts	Action
Enter	Opens the selected object
Del	Moves the selected Teamroom objects to the wastebasket or removes them from the object list, if they are pointers.
Backspace	Navigates one page back in the web browser history.
Ctrl + Enter	Opens the attribute editor.
F2	Switches selected cell between editor and navigation mode.
Alt + F9	Navigates to the column header, if the detail view is shown, otherwise to the sorting button.
Alt + F10	Navigates to the menu of the object list.

How the keys are organized

- The keys on your keyboard can be divided into several groups based on function:

- **Typing (alphanumeric) keys.** These keys include the same letter, number, punctuation, and symbol keys found on a traditional typewriter.

- **Special (Control) keys.** These keys are used alone or in combination with other keys to perform certain actions. The most frequently used control keys are CTRL, ALT, the Windows key, and ESC.

- **Function keys.** The function keys are used to perform specific tasks. They are labelled as F1, F2, F3, and so on, up to F12. The functionality of these keys differs from program to program.

- **Cursor Movement (Navigation) keys.** These keys are used for moving around in documents or WebPages and editing text. They include the arrow keys, HOME, END, PAGE UP, PAGE DOWN, DELETE, and INSERT and ARROW KEYS.

- **Numeric keypad.** The numeric keypad is handy for entering numbers quickly. The keys are grouped together in a block like a conventional calculator or adding machine.

Function Keys

e-mail, web browsing and explorer buttons

Escape key

Status Lights

Directional Keys

Main Typing Keypad

Cursor and Screen Controls

Numeric/directional Keypad

Typical Desktop Computer Keyboard

Internal Parts of Keyboard

- What are mechanical switches?
- Mechanical switches are the mechanisms underneath each key. They determine the activation of a keystroke.

Mechanical switches mounted on the keyboard

Keycaps
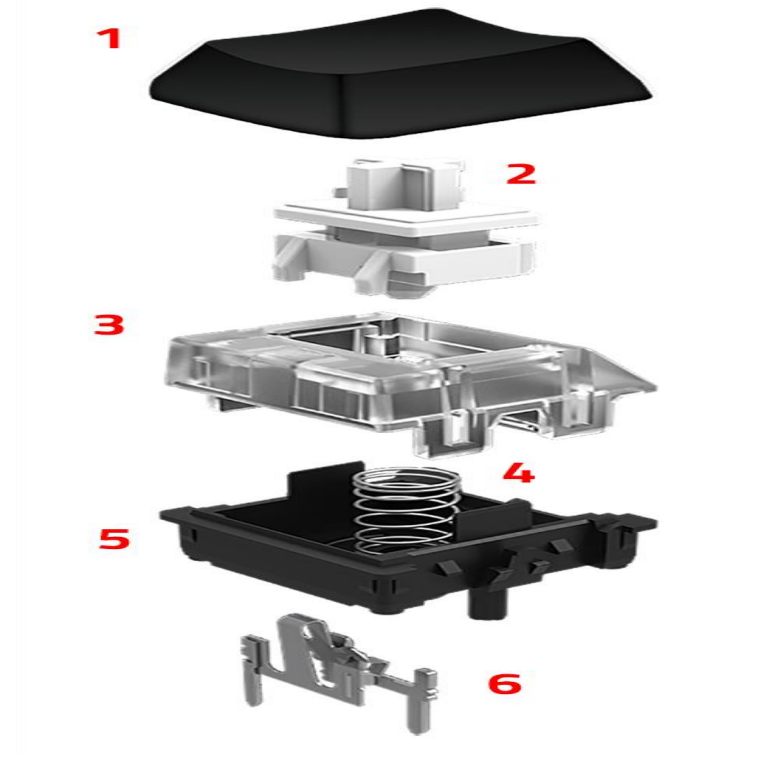
Mechanical switches

Switch puller

Keycap puller

Mechanical switches components

- Let's take a deeper look at the components of a mechanical switch and learn their importance one by one.

- The keycap
- The stem
- The upper housing
- The coil spring
- The base housing
- The crosspoint contact

Types of mechanical switches

- There are three types of mechanical switches: linear, tactile, and clicky. They are defined by their keystroke behaviour.

Linear switches

- Linear switches have the simplest operation.
- They move straight up and down without any tactile feedback or clicking noise.
- The smooth keystroke allows for more rapid actuation, making them the preferred switch for gamers.

Tactile switches

- Tactile switches provide tactile feedback.
- They provide a noticeable bump in the middle of travel to let you know that your key press has been registered.
- They are ideal for typing because you get a slight indication of a keypress without needing to bottom out your keys.

Clicky switches

- Clicky switches work the same way as tactile ones. But they offer a distinct "click" sound when the key is activated.

- They are great for those who want a distinct indication that of a keypress and for those who love the "clicky" sound.

Mechanical switches accessories

- Keycap-switch puller
- A keycap-switch puller is a small tool with looped tongs on one side to remove keycaps and another set of tongs on the other to remove switches.
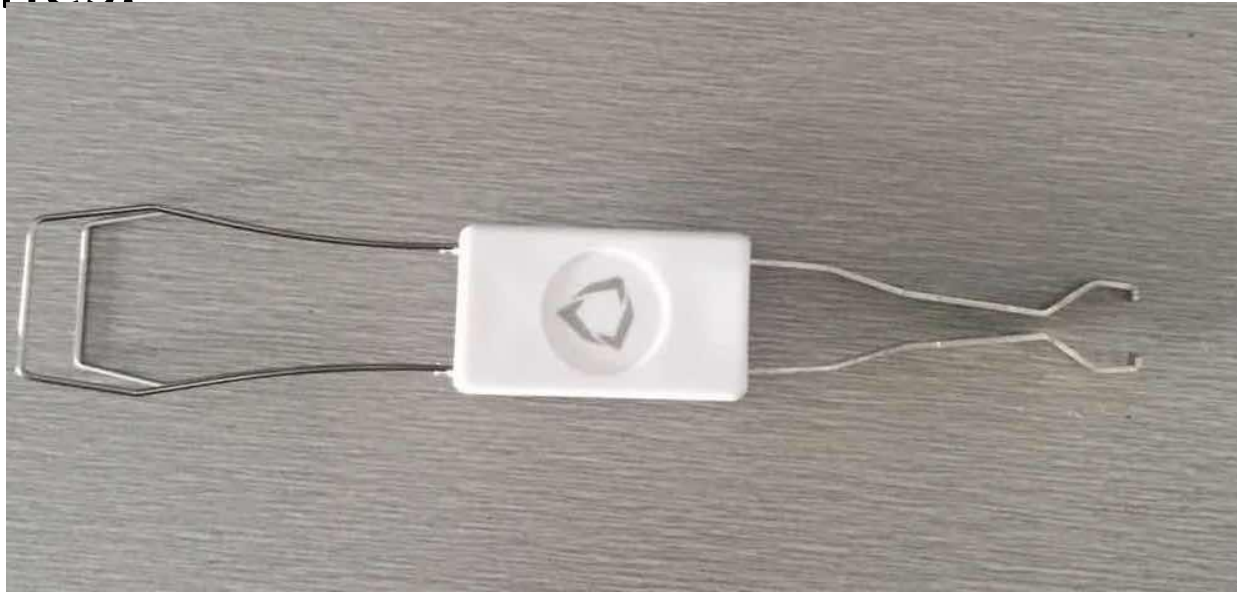
O-rings

- O-rings dampen the sound your keycaps make when you bottom out.

Keyboard Problems and Solutions

- **Problem**

- The keyboard is unresponsive.

- Always check the connections. Make sure they are firm and properly in their designated ports.
- Keyboards are commonly connected to computers through a PS/2 connector or a USB cable
- Turn off your computer disconnect the keyboard and reconnect it. Turn the computer back on.
- If your keyboard is still unresponsive, retry the following steps using a different port (for USB only).
- If the above does not result in a responsive keyboard, you will need to contact your technology coordinator for a replacement keyboard.
- NOTE: If your mouse and keyboard have the same connector, make sure you did not plug the keyboard into the mouse port and vice versa. They are usually color-coded.

- Problem
- Keyboard keys are getting stuck or are difficult to push.

- People do not realize but cleaning your keyboard is vital to keeping your keyboard running smoothly and properly.

- To start cleaning a keyboard first unplug it or turn off your computer. You may use compressed air on a computer keyboard as all kinds of dirt and dust can fall in between keys.

- Then spray alcohol, or a type of cleaner onto a cloth (NOT ON THE KEYBOARD ITSELF. THIS WILL ALMOST CERTAINLY BE WORSE FOR YOUR KEYBOARD). Individually rub the keys with the cloth for best results.

- Problem
- You want to create a keyboard shortcut for a command.

- Sticky keys are a type of shortcut developed by Microsoft that allows the user to press one key for a command that normally has you pressing 2 or more.

- For example: Instead of having to press three keys at once (such as when you must press the CTRL, ALT, and DELETE keys together to log on to Windows), you can press one key at a time by turning on Sticky Keys.

- To turn on Sticky Keys you can press the Shift key 5 times in a row. The computer then shows a box with further instructions along with a loud "beep".
- To turn it off you may press both shift keys at the same time.

- Problem
- Page Up/Page Down Keys Are Locked.

- Your "Scroll Lock" function may be engaged. Press the Scroll Lock Key once.
- Check the LED light on the keyboard to see it is off.

- Problem
- Letters are all in Capitals.

- Your "CAPS LOCK" key has been activated. Press the "CAPS LOCK" Key once to fix this problem. Check the LED light on the keyboard to see that it is off.

- Problem
- Multiples of the same letters appear when you hit the key once.

- If more than one of the same letter or number appears when you press a key once, this is called "key bounce."
- One way to decrease these problems is to reduce the key repeat rate and/or repeat delay, in your computer's operating system.
- This can be decreased in the "Keyboard" section of the Control Panel.