Lecture 1: Template for lecture presentation using official colors of Brno University of Technology

Course name/code

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Contents:

Lists and columns

Lists

Unordered list

- Lorem ipsum dolor sit amet, consectetuer adipiscing elit.
- Etiam sapien elit, consequat eget, tristique non, venenatis quis, ante.

Ordered list

1. Lorem ipsum dolor sit amet, consectetuer adipiscing elit.
2. Aliquam erat volutpat:
   - Integer lacinia.
   - Integer lacinia.

Multiple columns

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam sapien elit, consequat eget, tristique non, venenatis quis, ante.

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Blocks, examples, solutions

Blocks

Example 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

Solution 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

Figures, tables, and equations

Figure

```latex
\begin{center}
    \begin{figure}
        \includegraphics[width=0.4\textwidth]{logo.png}
        \caption{Your caption}
    \end{figure}
\end{center}
```


Figure: Your caption

Table

```
\begin{center}
    \begin{table}
        \caption{Your caption}
        \begin{tabular}{l | c | c | r}
            \textbf{ID} & \textbf{Duration} & \textbf{Complexity} & \textbf{Score}\\
            \hline\hline
            Algo 1 & 0.0159 & 0.50 & 78 \\
            Algo 2 & 0.0453 & 0.65 & 88 \\
            Algo 3 & 0.8642 & 0.77 & 95 \\
        \end{tabular}
    \end{table}
\end{center}
```

Table: Your caption

ID	Duration	Complexity	Score
Algo 1	0.0159	0.50	78
Algo 2	0.0453	0.65	88
Algo 3	0.8642	0.77	95

Equations

Pythagorean theorem can be written as: $a^2 + b^2 = c^2$ where c is the longest side of the triangle, a and b are the other two sides.

Other useful equations (thank you *John Napier*):

$$\log_b(x^p) = p \cdot \log_b(x) \qquad (1)$$

```
\begin{equation}
    \log _b (x^p) = p\cdot \log _b (x)
\end{equation}
```

$$\log_b(x) = y \quad \text{exactly if} \quad b^y = x$$

```
\begin{eqnarray*}
    \log _b(x) = y & \text{exactly if} & b^y = x
\end{eqnarray*}
```

Listings

Code listings

This is title

```c
void setup(void) {
    uart_init(UART_BAUD_SELECT(UART_BAUD_RATE, F_CPU));  // UART mode 8N1
    esp8266_init();  // Initialize ESP8266 Wi-Fi module
}
```

This is title

```vhdl
1 -------------------------------------------------------------
2 -- Entity declaration for hexadecimal to seven-segment decoder
3 -------------------------------------------------------------
4 entity hex_to_7seg is
5     port (hex_i: in  std_logic_vector(4-1 downto 0);
6           seg_o: out std_logic_vector(7-1 downto 0));
7 end entity hex_to_7seg;
```

Listing 1: This is caption

```matlab
x = 0:0.05:5;
y = sin(x.^2);
figure
plot(x,y)  % The plot function creates simple line plots of x and y values
```

Further reading

[1] MikroElektronika d.o.o. (2019).
PIC Microcontrollers - Programming in C. Online; accessed 8 January 2020.
https://www.mikroe.com/ebooks/pic-microcontrollers-programming-in-c/additional-components.

[2] A. Author.
Introduction to Giving Presentations.
Klein-Verlag, 1990.

[3] A. Author
On this and that.
Journal of This and That, 2(1):50–100, 2000.