Programming in Assembler – Laboratory

Exercise No.6
Interrupts handling

During the Exercise No.6 students are to analyze the programs using the CodeView Debugger. On the laboratory students will know some functions for interrupt handling and calling the default handlers. Programs are attached to the documentation in `lab6_1.asm` `lab6_2.asm` files.

Explanation of DOS functions used in the program:
25h – Set interrupt vector
AL = number of the interrupt;
DS:DX = far address of the procedure.

35h – Get interrupt vector
AL = number of the interrupt;
Returns ES:BX = far address of the procedure.

During the laboratory students are to:
1. Create the projects to the `lab6_1.asm` `lab6_2.asm` files with options for debugging and generating listing file.
2. Assemble the projects to the `*.exe` files and run the programs.
3. Analyze the programs with attention to methods of original interrupt handler calling.
4. Modify the program `lab6_1.asm` to display the ASCII code in HEX.
5. Modify the program `lab6_2.asm` to recognize end of the sentence with "!" and "?" characters (not only ".").

The report should consist of:
- Title page.
- Explanation of programs function.
- Far addresses of original interrupt handlers and new interrupt handlers.
- Modified program listing file.
- Description of used interrupts (09h, 60h).
- Comparison of calling methods of original interrupt handler.
- Explanation why in the `lab6_1.asm` `lab6_2.asm` using the function number 08h of DOS interrupt 21h for reading the character is forbidden.
- Conclusions.