C#/.NET courses we teach

- **NPRG035 (2/2 Zk/Z)** — Programming in C# Language (Winter)
- **NPRG038 (2/2 Zk/Z)** — Advanced C# Programming (Summer)
- **NPRG057 (2/0 Zk)** — Advanced .NET Programming II (Summer)
- **NPRG064 (0/2 Z)** — Programming user interfaces in .NET (Summer)
Requirements for the Credit

- Application
- Practical test
- Homeworks
- Theoretical exam
Application

- Specifikace: 11. 7. 2021
- 1. deadline: 6. 8. 2021
- 2. deadline: 10. 9. 2021

Source lines of code requirements for **NPRG035** and NPRG064:

- Presented until the 1. deadline: 30kB LOC
- Presented after the 1. deadline: 45kB LOC
- Presented after the 2. deadline: 60kB LOC

Source lines of code requirements for NPRG038, resp. NPRG057 (is enough for **NPRG035** as well):

- Presented until the 1. deadline: 45kB zdrojového kódu
- Presented after the 1. deadline: 60kB zdrojového kódu
- Presented after the 2. deadline: 90kB zdrojového kódu

For passing NPRG038, the application has to use some techniques learned on NPRG038 course (Threading, Networking, LINQ, Reflection, ...), resp. NPRG057 (Unsafe code, C++/CLI, Web Services, ...).
Practical test

• Complete one coding task within 3 hours
• During examination period
• Online documentation allowed
• Example: Convert logical formula on input into CNF — conjunction of clauses (disjunction of literals). Input formule is fully parenthesized and individual terms are separated by space. Variable may be any string of length at least one, & conjunction, | disjunction, ! negation, -> implication, <-> equivalence, using the following transcription rules, where a, b, c are formulas:

<table>
<thead>
<tr>
<th>Original</th>
<th>Transcribed</th>
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</thead>
<tbody>
<tr>
<td>! ! a</td>
<td>a</td>
</tr>
<tr>
<td>a -&gt; b</td>
<td>! a</td>
</tr>
<tr>
<td>a &lt;-&gt; b</td>
<td>(a -&gt; b) &amp; (b -&gt; a)</td>
</tr>
<tr>
<td>! (a &amp; b)</td>
<td>! a</td>
</tr>
<tr>
<td>! (a</td>
<td>b)</td>
</tr>
<tr>
<td>(a &amp; b)</td>
<td>c</td>
</tr>
</tbody>
</table>
Homeworks

- https://recodex.mff.cuni.cz/
- Homeworks in ReCodEx system, assigned every week, with a deadline in the following week
- At least **80p** required for passing the course
- Extra points can be converted into points for theoretical exam
- Extra homeworks (more difficult) at the end of semester for extra points