COMP9020 Week 2 Recap and Administrivia

Week 2 Recap

Sets, languages, relations and functions:

- Set notation: $\emptyset$, $\subseteq$, $\{\ldots\}$, $[\ldots]$
- Set operations: $\cap$, $\cup$, ^{c}, $\setminus$, $\oplus$, $\times$
- Symbols, words, languages
- Language definitions: Σ^*, length(), concatenation
- Relational image ($R(A)$), converse relation ($R^{\leftarrow}$), inverse image ($R^{\leftarrow}(B)$), relation composition ($R; S$)
- Domain, co-domain, image, function composition
- Surjective, injective and bijective functions

Need to know for this course

- Set operations
- Definitions of languages, relations and functions
- Relational/functional image, relational/functional composition

Quiz 2

- $|\{n : n \in \mathbb{N} \text{ and } n|12\}|$
- $\Sigma = \{c, u, p\}$, $\Psi = \{m, o, p\}$, $\Sigma^* \setminus \Psi^*$

Quiz 3

- $f : \mathbb{N}_{>0} \to \mathbb{N}_{>0}$ given by $f(x) = 2x + 1$
- $=$, $|$, $\leq$, $\{\}$, $\{(n-1, n) : n \in \mathbb{N}_{>0}\}$, $\{(n, m, n+m) : n, m \in \mathbb{N}\}$

Assignment 1

- Due Sunday 13th October, 23:59. (Last submission by Thursday 17th, 23:59).
- Lateness penalty: 10% (of raw mark) every 12 hours or part thereof
- Unable to meet deadline through illness/injury/misadventure: apply for Special Consideration
- Submission via webCMS or give
- Submissions should be typed, not handwritten.
- Typing math symbols: unicode, LaTeX

Assignment 1: marking

- Marks do not necessarily reflect difficulty
- Marking generally done on a 4 or 5 point percentage scale:
  - 0%: No reasonable attempt
  - 20-25%: Shows promise
  - 50%: Major errors; 3+ minor errors – not demonstrating one of understanding or ability
  - 75-80%: Minor errors
  - 100%: Excellent answer, clearly demonstrating understanding and ability