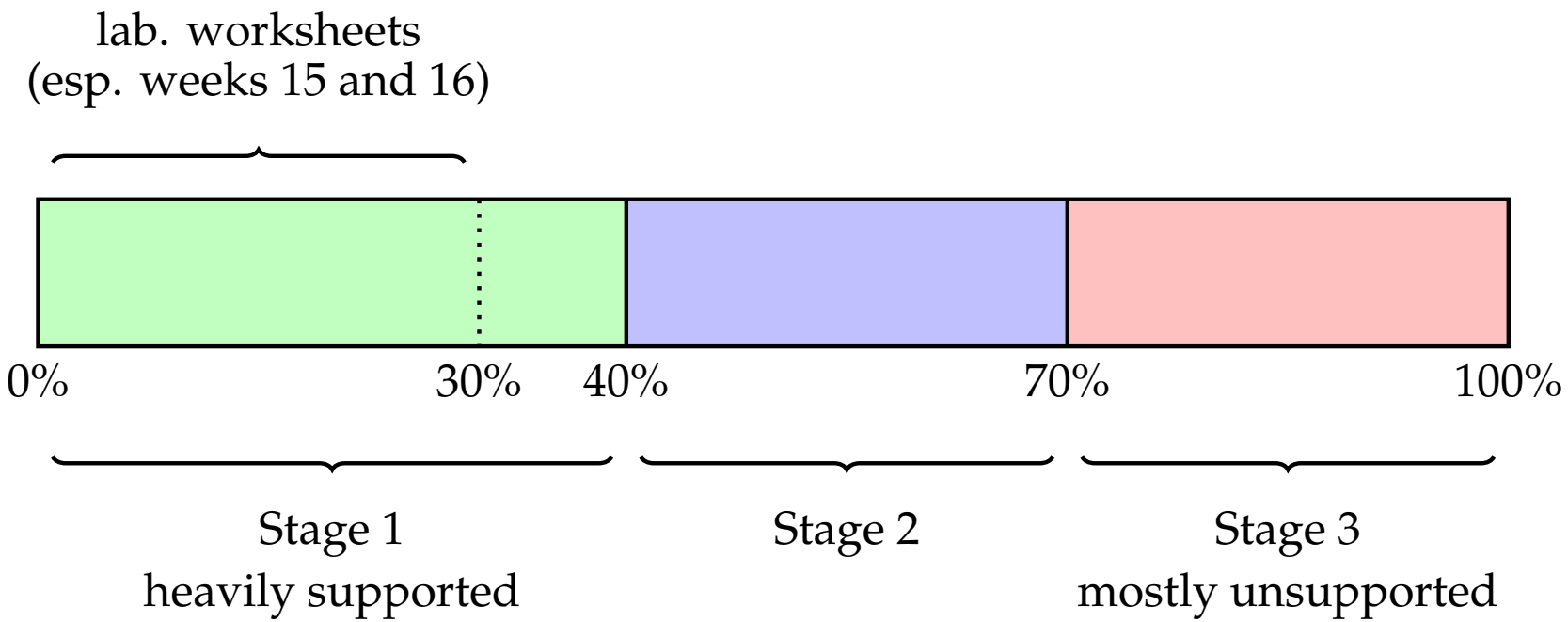
CW2 (1)

https://twitter.com/timClicks/status/1097801466473922565

Assignment = develop a (limited) operating system kernel

Intended Learning Outcomes (ILOs) =
- practical experience with concepts and techniques
- explore design space and trade-offs
- enhance development, debugging, and testing skill set
- exposure to pertinent standards (i.e., POSIX)
- ⋮


lab. worksheets
(esp. weeks 15 and 16)
0%
30%
40%
70%
100%
Stage 1
heavily supported
Stage 2
Stage 3
mostly unsupported

CW2 (3)
Common comments and feedback, plus some advice

- Comment:

  2015/16: "OS coursework was hard, but I really enjoyed doing it and learnt a lot"
  2016/17: "the kernel coursework, whilst challenging was incredibly rewarding"
  2017/18: "The OS coursework was probably the best coursework we've been offered so far"

- Response: ☺

- Comment:

  2015/16: "boring content but I think we all knew that"
  2016/17: "not what I'm interested in it so at points a bit dull"
  2017/18: "the content is boring to me"

- Response: ☹

- Comment:

  2016/17: "CW2 implements a very niche aspect of CS (almost nothing on stackoverflow)"
  2017/18: "Concurrent Computing has been a crazy!"

- Response: 😕

CW2 (4)
Common comments and feedback, plus some advice

- Comment:

  2015/16: “the coursework was wayyyy too much work”
  2016/17: “CW2 was too time consuming”
  2017/18: “the coursework took a lot of time”

- Response:

$$\text{COMS20001} \quad \mapsto \quad \text{CW1} + \text{CW2} + \text{exam} \quad = \quad 5\,\text{CP} + 5\,\text{CP} + 10\,\text{CP} \quad = \quad 20\,\text{CP}$$

CW2 (4)
Common comments and feedback, plus some advice

- Comment:

  2015/16: “the coursework was wayyyy too much work”
  2016/17: “CW2 was too time consuming”
  2017/18: “the coursework took a lot of time”

- Response:

$$
\begin{array}{lcllcll}
\text{COMS20001} & \mapsto & \text{TB1} + \text{TB2} & & & = & 20\ \text{CP} \\
\text{TB1} & \mapsto & \text{CW1} & + \frac{1}{2}\ \text{exam} & = 5\ \text{CP} + 5\ \text{CP} & = & 10\ \text{CP} \\
\text{TB2} & \mapsto & \text{CW2} & + \frac{1}{2}\ \text{exam} & = 5\ \text{CP} + 5\ \text{CP} & = & 10\ \text{CP}
\end{array}
$$

- Comment:

  2015/16: "the coursework was wayyyy too much work"
  2016/17: "CW2 was too time consuming"
  2017/18: "the coursework took a lot of time"

- Response:

Quote

3.20 [...] One credit point represents approximately 10 notional hours of student input.

– *http://www.bristol.ac.uk/academic-quality/assessment/codeonline.html*

so CW2 *should* take ~ 50 hours work; per results from `marksheet.txt`

2015/16: 56.23 hours average (maximum of 150, minimum of 5).
2016/17: 52.71 hours average (maximum of 200, minimum of 9).
2017/18: 60.65 hours average (maximum of 170, minimum of 10).

CW2 (5)
Common comments and feedback, plus some advice

- Comment:

  2015/16: "open ended nature made it hard to decide when to stop"
  2016/17: "the mark scheme for the CW2 was very harsh"
  2017/18: "nebulous 'anti-features' [...] no information as to what we have to include"

- Response:
  - The assessment process is st.
    1. each (sub-)stage X has an explicit success criteria; this will state where to stop,
    2. if `marksheet.txt` states that X is worth Y%, meeting the success criteria for X gains Y%,
    3. I will assess the *quality* of a solution for X, and deduct Z% based on a set of (anti-)features.

- Comment:

  2015/16: "open ended nature made it hard to decide when to stop"
  2016/17: "the mark scheme for the CW2 was very harsh"
  2017/18: "nebulous 'anti-features' [...] no information as to what we have to include"

- Response:

  - Doing so isn't easy, so use of a viva is crucial
    - light-weight for you ~ 20 minutes,
    - heavy-weight for me ~ 3 weeks (although not using a viva would be similar), *but*
    - I can ask you questions and judge choices and trade-offs, vs. just having the source code,

    noting that *you* need to sign up for a slot.

- Comment:

  2015/16: "open ended nature made it hard to decide when to stop"
  2016/17: "the mark scheme for the CW2 was very harsh"
  2017/18: "nebulous 'anti-features' [...] no information as to what we have to include"

- Response:

- Previous results don't seem to match general perception, i.e.,

  2015/16: average mark was 70 (maximum of 100, minimum of 20 bar any 0 outliers)
  2016/17: average mark was 63 (maximum of 100, minimum of 20 bar any 0 outliers)
  2017/18: average mark was 64 (maximum of 100, minimum of 30 bar any 0 outliers)

- Comment:

  2015/16: "[spent a long time] just trying to get my head around the assembly portion"
  2015/16: "could have had better technical support relevant to ARM architecture"
  2017/18: "the lab sheets are hard to understand, especially assembly language"

- Response:
  - assembly language concepts assumed from COMS12200,
  - the assignment is designed st.

`lolevel.s`	$\mapsto$	assembly language	$\simeq$	5% of typical solution
`hilevel.s`	$\mapsto$	C	$\simeq$	95% of typical solution

  - the worksheets, in combination, provide *everything* needed for `lolevel.s`,
  - there are some excellent support resources available, e.g.,

`http://www.davespace.co.uk/arm`

Questions?

References