

While you wait, please check
Spaces for my replies to your posts!



Intro to Computer Science

Grade 11 – Pre AP
Thread 1, Day 7

Russell Gordon, Lakefield College School

Submit attendance!



Thread 1, Day 7

Agenda

- Due date: Mid-thread portfolio evaluation
- Portfolio updates: An exemplar
- Portfolios: Labelling posts
- Coding style: camelCase vs. CapitalCase
- Source control: Getting links to commits
- Searching: Looking up prior knowledge
- Discussion: Ish video – *Programming with Purpose*
- Working Period: First Steps in Swift
- Homework: First Steps in Swift

Due Date

Mid-thread portfolio evaluation

- Next Monday, January 18
- Private conversation with Mr. Gordon
- Point to your Spaces portfolio, justify achievement level
 - Exceeding, meeting, or approaching expectations

The screenshot shows the Edsby Learning Management System (LMS) interface. At the top, the browser address bar shows 'lcs.edsby.com'. The Edsby logo is on the left, and a search bar is in the center. On the right, the user 'Russell Gordon' is logged in. Below the header, the page title is 'Introduction to Computer Science AP Prep' with a dropdown arrow. Navigation links include 'Class', 'Evidence', 'Gradebook', 'Perspective', 'Planner', and 'Attendance'. The left sidebar shows 'Teachers' with 'Mr. Russell Gordon' and 'Pinned Items' with a Zoom link. The main content area has a post from 'Mr. Russell Gordon' dated '1d' about a 'Portfolio: Mid-Thread Portfolio Eval - Monday, January 18 2021 @ 2:00PM'. The right sidebar shows the date 'Wed, Jan 13' and a calendar view with a red box highlighting a 'Next Week' event: '(Due: Mon 18th) Portfolio: Mid-Thread Portfolio... Introduction to Computer Science AP Prep'.

Portfolio updates

An exemplar

ca.spacesedu.com

2/2

```
62 }
63
64
65 // Functions are a way to group/incapculate related behavior...
66
67 func getAlternateRepresentation(of valueToConvert: Int, inBase base: NumberSyetemBase) ->
68     String{
69
70     // creates a variable with value of "valueToConvert"...
71     var decimalValueLeftToConvert = valueToConvert
72     // this creates an empty string...
73     var representation = ""
74
75     // the abstraction we will use is a loop...
76     while decimalValueLeftToConvert > 0 {
77
78         // get the next digit
79         let nextDigit = decimalValueLeftToConvert % base.rawValue
80
81         // add that new digit to the binary representation...
82         if base == .hexadecimal {
83             // an == is a comparison...
84             switch nextDigit {
85                 case 0...9:
86                     representation = String(nextDigit) + representation
87                 case 10:
88                     representation = "A" + representation
89                 case 11:
90                     representation = "B" + representation
91                 case 12:
92
93             }
94         }
95     }
96 }
```

Post

Jan 13, 2021, 4:15 PM

Portfolio

Day 6

1. What did I learn or make progress upon today?

We started using enumerators to give the code more parameters and making it more concise aka an abstraction. these enumerations allowed us to create cases for binary, octol and hexadecimal. this leads to us having the ability to convert 10-15 into letters of the alphabet in the final answers automatically. I also learned about switch statements which are really cool because it allows you to set a condition and if that condition is true it alters the outcome to the code.

2. What do I have questions about / what am I struggling with

I was wondering where we are going with this. I know I could just wait till we get there but I'm curious of your expectation of us are by the end of the module. I just wanna know what you expect us to be able to do by the end of this module

1

RG

Russell Gordon • Jan 14, 2021, 8:12 AM

Hi

Good summary and evidence (the screenshots).

We are building up to, in the next week or so, being able to make a simple app with a user interface that performs a small task or does a calculation. By the end of the module you should be able to do that independently. You will see how this is relatively straightforward using the SwiftUI framework, which we will start learning shortly.

Learning about the different number systems is hitting on some key Ontario and AP curriculum expectations, but more generally, it's setting me up to be able to explain to the class how a computer works on a fundamental level (processors interpreting machine code which is in binary).

RG

Add comment...

Portfolios

Labelling posts

- It's human to fall behind once in a while.
- Some of you do need to circle back and improve or add posts to Spaces – six days of classes so far means six posts.
- To make posts easier to reference (for you in the future, for me now) please label with the day.
 - e.g.: Day 1
- The *date* is automatically added to your posts, no need to add that.



Coding style

camelCase vs. CapitalCase

- When defining variables or constants, use camelCase, like this:

```
// Get next digit, divide by the raw value of the enumeration  
let nextDigit = decimalValueLeftToConvert % base.rawValue
```

- No spaces, first word all lowercase, remaining words have first letter capitalized.
- When defining a new *type*, use CapitalCase, like this:

```
enum NumberSystemBase: Int {
```

- No spaces, all words have first letter capitalized.

Source Control

Getting the link to a specific commit

- Source Control Navigator (Command-2)
- Select the blue folder, top-left
- Find the commit you want
- Two-finger-tap, choose "View on GitHub"
- In browser window that opens, copy the URL from the address bar
- Paste the URL in your Spaces post
- I will demonstrate this now...

Searching

Looking up prior knowledge

- You can search a repository for prior commits
 - I will demonstrate this now...
- You can also search within a project
 - As your Notes project grows, this will be helpful
 - I will demonstrate this now...

Discussion

Ish video – *Programming with Purpose*

"I see... I think... I wonder..."

Please enter your reflection in the chat window.

Discussion

Ish video – *Programming with Purpose*

- Charley said:

"I saw Ish suggesting us to be curious about things and take actions. I think it is a very good way for learning new things because you can always ask why to yourself and in order to figure it out, you have to do researches and you learn from these researches. I wonder if I was being curious about things I have seen before, how many much new knowledge would I know by now."

Discussion

Ish video – *Programming with Purpose*

- Devon said:

"Ish mentioned that in his childhood he was just focused on surviving he said 'I didn't feel safe at home, I didn't feel safe outside, and I didn't feel safe at school.' It makes me think about how blessed I am to be able to feel safe at home with my family or even at home here at Lakefield. It also makes me feel motivated to do better because of the better circumstances that I have compared to others who have contributed more to the world than me. I feel that I could put more effort into everything I do and use the resources available to me to improve myself as a person."

Discussion

Ish video – *Programming with Purpose*

- Ben said:

"I saw him mention that he strives to help a lot of people in small ways. I think that this is a very mature way of thinking. Most people would have trouble thinking how a small action can help someone in a big way so I think it's great that he thinks this and is spreading the message. I wonder what I could do to help people in my own way."

Discussion

Ish video – *Programming with Purpose*

- Rowan said:

"I saw Ish discuss the value of doing small things and how little things add up into big things. I think this is a good way to think about doing “small” things. I wonder how I can apply this idea in my own life to learn or get better at skills"

Discussion

Ish video – *Programming with Purpose*

- Dylan said:

"I saw Ish mention the phrase 'And then what?' I think that this is a good way to approach life. Always finding something else to do next can lead to a more productive lifestyle. I wonder what would happen if I just kept asking 'And then what?' and if I kept finding other things to do."

Discussion

Ish video – *Programming with Purpose*

- Evan said:

"I saw Ish mention the idea that “little things become big things so even if you don’t seem to be making making progress in an area stay focused on the direction you want to proceed in and make small steps in that direction when you can”. I think this is a good message about not giving up and how even if it doesn’t look like you are making progress you are. I wonder how many people could use this message and how many people it would help people to keep trying."

Discussion

Ish video – *Programming with Purpose*

- Steven said:

"I saw he mentioned that people need to set some purpose or goals. I think it's a really helpful and important thing. I wonder what if people can not find his purpose, or they already finish all of them."

Discussion

Ish video – *Programming with Purpose*

- Mo said:

"I saw that Ish didn't let himself down after getting bullied, but thinking how he can make friends with them. I think that his goal of waking up in the morning and thinking "Don't die" is very strange. I wonder what would have happened if that teacher of his didn't buy that computer. Would he still be a programmer?"

Discussion

Ish video – *Programming with Purpose*

- Brad said:

"I saw Ish mention the phrase fake it till you make it. I think this is a different but interesting way of going about learning something new. I wonder if using this idea to learn something can cause faster improvement in something, or if someone always faked it but never made it."

Discussion

Ish video – *Programming with Purpose*

- Kat said:

"I saw Ish mention:

“What if time is not linear? And what if everything happening now has already happened. The result is set.”

I think about how if this is true, it would make me less uneasy about my future. It would allow for me go with the flow more often. I also think that it's really brave to make such a large assumption about life; many people don't like to think about life that much. I wonder if other people also think that time is not linear and whether that impacts their life positively or negatively."

Discussion

Ish video – *Programming with Purpose*

- Diego said:

"I saw Ish mention the idea that small things become big things over time and take small steps towards achieving your goal. I think this is an interesting way of working towards your goal because normally I would want to make something big first. I wonder if after making numerous small projects I will be able to make a big project which combines the ideas of all the smaller projects."

Discussion

Ish video – *Programming with Purpose*

- Yeseo said:

"I saw Ish ending his video with the following advice: "Live life like you've gotten a second chance to do it again." I thought this was a very creative way of looking at our life and that I should apply this into my own. In fact, I was mesmerized with this idea because the message here is the same with the popular quote "You only live once" but it also suggests that we'd have more deliberation if we live our "second life" to make up for the flaws we made in the "first." I wonder what kind of flaws I could've made in my "first" that I have to fix in my "second," the present."

Discussion

Ish video – *Programming with Purpose*

- Luck said:

I saw Ish mentioned an idea, "Little things become big things"

Even if I have no outstanding contributions in a certain field, this does not mean I need to give up. I should continue to work hard to achieve every small goal I set myself. It's like walking small steps on a long road. I firmly believe that as long as we don't give up, we can accomplish our big goal.

I want to know what kind of little things are the most useful and can enable me to achieve my big goals. How to make my small goal is the most reasonable.

Working Period

First Steps in Swift

- You need to circle back and deeply learn some initial core concepts
 - Try out each example...
 - Do this in your Notes project, we will create a new playground now
- *Be sure to complete each topic's mini-quiz!*

Homework

First Steps in Swift

- Finish up...
 - You need to circle back and deeply learn some initial core concepts
 - Try out each example...
 - Do this in your Notes project, we will create a new playground now
 - *Be sure to complete each topic's mini-quiz!*

Thank-you!