Craig Lynagh
PDA: Software Development

I&T I.T 1

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I&T I.T 2


```java
public class MusicFormatTest {

  MusicFormat musicFormat;
  MusicType type;
  MusicFormat cassette;
  MusicFormat compactDisc;
  MusicFormat record;

  @Before
  public void before(){
cassette = new MusicFormat(202, "Sonic Youth", "Sonic Death", MusicType.CASSETTE, 10, 20);
compactDisc = new MusicFormat(203, "Violent Femmes", "American People", MusicType.COMPACT_DISC, 8, 16);
record = new MusicFormat(204, "The Doors", "Morrison Hotel", MusicType.RECORD, 15, 30);
  }

  @Test
  public void hadFormatId(){
    assertEquals(204, record.getFormatId());
  }

  @Test
  public void hasArtistName(){
    assertEquals("Sonic Youth", cassette.getArtistName());
  }

  @Test
  public void hasAlbumName(){
    assertEquals("American People", compactDisc.getAlbumName());
  }

  @Test
  public void hasType(){
    assertEquals(MusicType.COMPACT_DISC, compactDisc.getType());
  }

  @Test
  public void hasRetailPrice(){
    assertEquals(30, record.getRetailPrice());
  }

  @Test
  public void canGetMarkup() {
    assertEquals(15, record.calculateMarkup());
  }
}
```

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I&T I.T 3

```ruby
# I.T 3 & 4
# Demonstrate searching datat in a program.
# Function that searches data
# The result of the function running


rounds = [72,74,68,72,75, 71, 68, 71]

def golf_average_par(rounds)
  total = 0
  for round in rounds
    total = total + round
  end
  return total/rounds.length
end

result = golf_average_par(rounds).to_s + " is my average score per round of

puts result
puts "----------------------------------------------------"
puts rounds.collect { |x| x.to_s + " is par for this round"}
puts "----------------------------------------------------"
puts rounds.sort { |x,y| y <=> x}
puts "----------------------------------------------------"
puts rounds.reverse
```

```
74
72
Evidence git:(master) x ruby pda_evidence_week3.rb
71 is my average score per round of golf!
----------------------------------------------------
72 is par for this round
74 is par for this round
68 is par for this round
72 is par for this round
75 is par for this round
71 is par for this round
68 is par for this round
71 is par for this round
----------------------------------------------------
75
74
72
72
71
71
68
68
----------------------------------------------------
71
68
71
75
72
68
74
72
Evidence git:(master) x
```

ugh Toptal. No risk.

I&T I.T 4

```ruby
# I.T 3 & 4
# Demonstrate searching datat in a program.
# Function that searches data
# The result of the function running


rounds = [72,74,68,72,75, 71, 68, 71]

def golf_average_par(rounds)
  total = 0
  for round in rounds
    total = total + round
  end
  return total/rounds.length
end

result = golf_average_par(rounds).to_s + " is my average score per round of golf!"

puts result
puts "----------------------------------------------------"


rounds = [72,74,68,72,75, 71, 68, 71]
def golf_par_comparison(rounds)
  return rounds.sort.collect { |x| (x - 76) }
end

scores = golf_par_comparison(rounds).to_s + " is the par scores for the individual
  rounds "

puts scores
```

```
..2 PDA Example          -zsh ...          ~/codeclan_wc
codeclan_work ruby pda_evidence_week3.rb
71 is my average score per round of golf!
----------------------------------------------------
[-8, -8, -5, -5, -4, -4, -2, -1] is the par scores for the individual rounds
codeclan_work
```

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I&T: I.T 5

```ruby
# I.T 5
# Demonstrate the use of an array in a program
# An array in a program
# A function that uses the array
# The result of the function running


rounds = [72,74,68,72,75, 71, 68, 71]

def golf_average_par(rounds)
  total = 0
  for round in rounds
    total = total + round
  end
  return total/rounds.length
end

result = golf_average_par(rounds).to_s + " is my par average"

puts result
```

```
→ Evidence git:(master) ✗ ruby pda_evidence.rb
71 is my par average
Radiohead has 4 members
Nirvana has 3 members
Sonic Youth has 4 members
→ Evidence git:(master) ✗ ruby pda_evidence.rb
71 is my par average
→ Evidence git:(master) ✗
```

I&T: I.T 6

```ruby
# I.T 6
# Demonstrate the use of a hash in a program
# An hash in a program
# A function that uses the hash
# The result of the function running


bands = [

  band1 = {
  band_name: "Radiohead",
  members: 4,
  albums: 11,
  names: ["Thom","Jonny","Ed", "Colin", "Philip"],
  genre: "alternative"
  },

  band2 = {
  band_name: "Nirvana",
  members: 2,
  albums: 5,
  names: ["Kurt","Krist","Dave"],
  genre: "grunge"
  },

  band3 = {
  band_name: "Sonic Youth",
  members: 4,
  albums: 9,
  names: ["Kim","Thurston","Lee", "Steve"],
  genre: "alternative"
  },

]

def band_total_members(bands)
  band_members = []
  for band in bands
    band_members.push(band[:band_name]) if band[:members] > 3
  end
  return band_members
end

band = band_total_members(bands)

puts band
```

```
→ Evidence ruby pda_evidence.rb
Radiohead
Sonic Youth
→ Evidence
```

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I&T: I.T 7

I & T Static & Dynamic Testing Task A