Revature AP

## Abstract

Revature AP will be conducted throughout training, and will consist of at least one coding challenge that will be done each week either individually or with a group. More importantly, each challenge will be followed by time set aside for the associates to discuss what they have learned from the challenge. Each week has a different goal, that is given during each week’s details.

For now, Revature AP supports solely challenges and contests built using HackerRank. Please see [this tutorial](https://www.hackerrank.com/problemsetter) for instructions on how to set up the Hackerrank Contest for your associates.

[TODO: details for setting up contest (title, directions, etc)]

## Week-by-Week Plan

### Week A -

* Day 1: Welcome Hackerrank
  + Goal: Introduce idea of hackerrank
  + Challenge: [Simple Sum Array](https://www.hackerrank.com/challenges/simple-array-sum/problem) [any language]
  + Time: 20 min
  + Trainer Led Discussion: spend 10min with batch explaining

### Week B -

* Day 1: HackerRank Assessment
  + Goal: Simple exercise that gives experience working with 2-d arrays.
  + Challenge: [Diagonal Difference](https://www.hackerrank.com/challenges/diagonal-difference) [any language]
  + Time: 20 min
  + Trainer Led Discussion: spend 10min with batch explaining

### Week 1 -

* Day 1: Welcome Hackerrank
  + Goal: Introduce idea of hackerrank
  + Challenge: [Simple Sum Array](https://www.hackerrank.com/challenges/simple-array-sum/problem) [any language]
  + Time: 20 min
  + Trainer Led Discussion: spend 10min with batch explaining
* Extended Batch Alternate:
  + Goal: Another exercise working with 2-d arrays.
  + Challenge: [2D Array - DS](https://www.hackerrank.com/challenges/2d-array/problem) [any language]
  + Time: 20 min
  + Trainer Led Discussion: spend 10min with batch explaining

### Week 2 -

* Day 1: Hackerrank Assessment
  + Goal: Both asses associates and introduce idea of reviewing problems as a team
  + Challenges: [CamelCase](https://www.hackerrank.com/challenges/camelcase/problem) [core language], [Library Fine](https://www.hackerrank.com/challenges/library-fine) [core language]
  + Time: 1hr
  + Discussion: give batch 30min to review Library Fine as a group, supervise

### Week 3 -

* Day 1: Hackerrank Assessment
  + Goal: Assess associate in ability to problem solve in another programming language
  + Challenge: [New Companies](https://www.hackerrank.com/challenges/the-company) [SQL]
  + Time: 30min
  + Discussion: N/A
* Day 5: Group Hackerrank Exercise
  + Goal: introduce idea of solving problem with group
  + Challenge: [Forming a Magic Square](https://www.hackerrank.com/challenges/magic-square-forming) [core language]
  + Time: 30min
  + Process: give batch 30min to try and solve the problem together, supervised

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### Week 4 -

* Day 1: Paired Programming Hackerrank Assessment
  + Goal: assess associates, introduce idea of problem solving with a partner
  + Pairing: trainer should assign partners using best judgement
  + Challenge: [Staircase](https://www.hackerrank.com/challenges/staircase) [JS] or Angry Professor
  + Time: 30min
  + Discussion: give batch 20min to review Staircase as a group, unsupervised

### Week 5 -

* Day 1: assign individual Hackerrank Research Assignment
  + Goal: assess associates ability to research a problem on their own
  + Challenge: [Queen's Attack II](https://www.hackerrank.com/challenges/queens-attack-2/problem?h_r=internal-search) [core language]
  + Time: 5 days
* Day 5: presentation on solution to research assignment
  + Goal: give associates practice articulating solutions and reasoning
  + Time: 1hr, supervised

### Week 6 -

* Day 1: Group Hackerrank Assessment
  + Goal: assess associates ability to solve a problem as a group in preparation for P2
  + Challenge: [Lego Block](https://www.hackerrank.com/challenges/lego-blocks/problem) [core language]
  + Time: 1hr

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### Week 7 -

* Day 1: assign group Hackerrank Research Assignment
  + Goal: introduce idea of researching problem with group
  + Challenge: [Bowling Pins](https://www.hackerrank.com/challenges/bowling-pins/problem?h_r=internal-search) [core language]
  + Time: 5 days
* Day 2: group discussion time for research assignment
  + Time: 30 min
  + Discussion: group led, unsupervised
* Day 3: group discussion time for research assignment
  + Time: 30 min
  + Discussion: group led, unsupervised
* Day 4: group discussion time for research assignment
  + Time: 30 min
  + Discussion: group led, unsupervised
* Day 5: presentation on solution of problem
  + Time: 30min
  + Discussion: group explains to trainer solution and reasoning

### Week 8 -

* Day 1: Individual Hackerrank Assessment
  + Goal: see associates progress as well as ability to solve problems in language of their choice
  + Challenges: [Bigger is Greater](https://www.hackerrank.com/challenges/bigger-is-greater) [any language], [Gaming Array](https://www.hackerrank.com/challenges/an-interesting-game-1) [any language]
  + Time: 1hr
  + Discussion: give batch 30min review both problems as a group, unsupervised

### Final Challenge -

* Full Stack Batches:
  + Select one:
    - [Full Stack Project - Time in Words](https://docs.google.com/document/d/11s_L0ayQzS6EZGmoJ3n2idYRCI4idDCxyxOuSpJRamU/edit)
    - [Full Stack Project - Cipher](https://docs.google.com/document/d/1YYum0tvx6fsrRaFQ66LHxgEg8rBv8wal7xerKGrTuDY/edit)
* BPM Batches:
  + TBD
* Big Data Batches:
  + TBD
* Cloud/Sys Admin
  + TBD

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