V8 Pwn Cheat Sheet

V8 version

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commit d8914f7033295aa02fa72a73344e84edff87c70a (HEAD, tag: 10.5.1
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    Reviewed-on: https://chromium-review.googlesource.com/c/v8/v8/
    Bot-Commit: v8-ci-autoroll-builder <v8-ci-autoroll-builder@chc
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    Cr-Branched-From: db3e14d3a231a1cf9eec888cf0a950aecf4a6d0b-ref
```

Map

- map.h, map.tq
  - descriptor-array.tq
    - PropertyDetails
      - If object has fast mode properties, PropertyDetails contains a property index
    - AccessInfoFactory::ComputeDataFieldAccessInfo
      - PropertyValue may contains Weak<Map>

Objects

- objects.h
  - HeapObject
    - JSReceiver
      - JSObject
        - JSArray
        - JSArrayBuffer

Inline Cache and Map Transition

- IC
  - FeedbackNexus
    - FeedbackVector
      - feedback-vector.tq
- GetNamedProperty
  - AccessorAssembler::LoadIC_BytecodeHandler
    - Runtime_LoadIC_Miss
- SetNamedProperty
  - InterpreterSetNamedPropertyAssembler::SetNamedProperty
    - AccessorAssembler::StoreIC
      - Runtime_StoreIC_Miss
        - StoreIC::Store
          - MigrateDeprecated
            - JSObject::MigrateInstance
              - JSObject::MigrateToMap
                - MigrateFastToSlow
                  - HeapObject::set_map
                    - update deprecated map
          - Object::SetProperty
            - Object::SetPropertyInternal
              - Object::SetDataProperty
                - Map::PrepareForDataProperty
                  - UpdateDescriptorForValue
                    - MapUpdater::ReconfigureToDataField
                      - MapUpdater::TryReconfigureToDataFieldInplace
                        - MapUpdater::GeneralizeField
                          - MapUpdater::GeneralizeField

- MapUpdater::UpdateFieldType
  - DescriptorArray::Replace
    - updatemap.value
- MapUpdater::ConstructNewMap
  - Map::DeprecateTransitionTree
    - deplicate map
- Object::AddDataProperty
  - Object::PrepareTransitionToDataProperty