V8 Pwn Cheat Sheet

V8 version

```
commit d8914f7033295aa02fa72a73344e84edff87c70a (HEAD, tag: 10.5.118,
origin/chromium/5159, origin/chromium/5158, origin/chromium/5157, origin/canary,
origin/10.5.118)
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    Change-Id: I7d0574b460ea4c42ede4227d2ad3cd27f461b23b
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accounts.iam.gserviceaccount.com>
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    Cr-Branched-From: db3e14d3a231a1cf9eec888cf0a950aecf4a6d0b-refs/heads/main@{#81497}
```

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](#)
                                - update
                                  map.value

                - [MapUpdater::ConstructNewMap](#)
                  - [Map::DeprecateTransitionTree](#)
                    - deplicate
                      map

          - [Object::AddDataProperty](#)
            - [Object::PrepareTransitionToDataProperty](#)