Back / Forward Cache

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Objectives

- Make pages suspendable most of the time (~98%)

- Allow for much faster back/forward navigation

- Means addressing most failures to suspend, not introducing new ones

ActiveDOMObject

- Largest cause of failures

- Need to drop all `shouldPreventEnteringBackForwardCache_DEPRECATED()` overrides

- Queue tasks on the event loop for running script (e.g. event dispatch, promise resolution)

- Pause CPU-intensive work (e.g. animations) in `suspend()` and unpause it in `resume()`

- Abort work that cannot be paused in `suspend()` and make sure tasks to dispatch relevant error events are queued on the event loop

Dedicated Workers

- Dedicated workers have their whole thread suspended when entering the back/forward cache

- `ActiveDOMObject::suspend()` / `resume()` do not get called

Service Workers

- Service workers cannot be easily suspended because they can be shared

- When a client page goes into the back/forward cache, it gets disconnected as a client of the service worker

- When a service worker no longer has any clients, it is terminated