



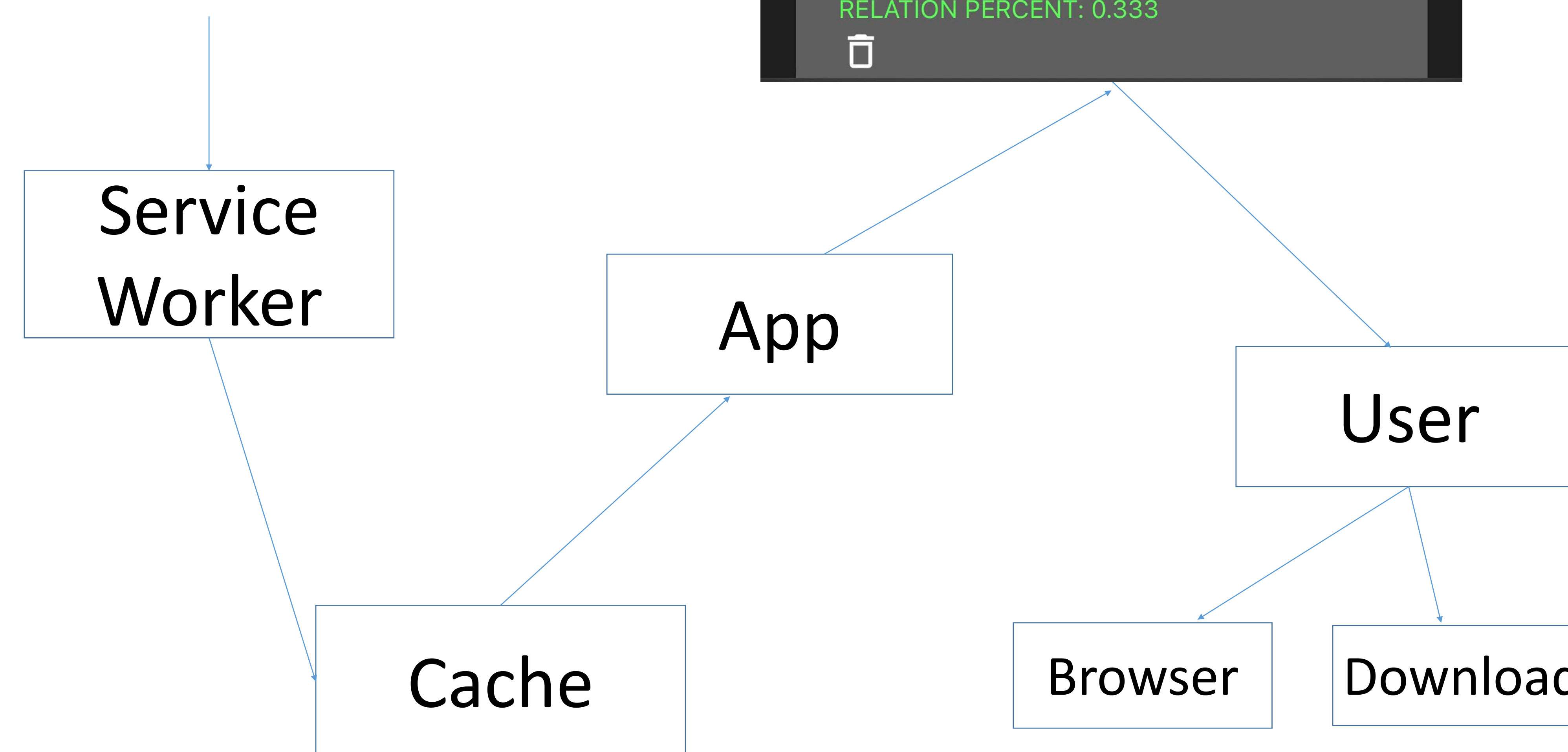
What is a PWA

- PWA's are Progressive Web Applications that can be accessed from any browser, mobile device or operating system and can be downloaded from the browser to be used more like a native application
- With persistence, the data is cached directly through the app which makes the database useable with no internet connectivity.
- All changes made offline are updated server-side when the application is brought back online.
- We chose to implement a PWA using protein-protein interaction data, but the framework can be used for any field that may require database management where internet access may be inadequate.



Sample data

TFC3	YAL001C	TFC1	YBR123C	0.989
TFC3	YAL001C	TFC6	YDR362C	0.989
TFC3	YAL001C	YRA1	YDR381W	0.303
TFC3	YAL001C	TFC4	YGR047C	0.989
TFC3	YAL001C	TFC7	YOR110W	0.99
ERP2	YAL007C	ERP1	YAR002C-A	0.728
ERP2	YAL007C	HTA2	YBL003C	0.58
ERP2	YAL007C	HHF1	YBR009C	0.722
ERP2	YAL007C	SSS1	YDR086C	0.322
ERP2	YAL007C	HMO1	YDR174W	0.722
ERP2	YAL007C	YRA1	YDR381W	0.507
ERP2	YAL007C	PMA1	YGL008C	0.825
ERP2	YAL007C	OLE1	YGL055W	0.798
ERP2	YAL007C	EMP24	YGL200C	0.765
ERP2	YAL007C	PHB2	YGR231C	0.322
ERP2	YAL007C	KAR2	YJL034W	0.825
ERP2	YAL007C	RPL10	YLR075W	0.527
ERP2	YAL007C	STM1	YLR150W	0.334
ERP2	YAL007C	FKS1	YLR342W	0.334
ERP2	YAL007C	ERV25	YML012W	0.93
ERP2	YAL007C	SCJ1	YMR214W	0.739
ERP2	YAL007C	POR1	YNL055C	0.334
FUN36	YAL011W	HTA2	YBL003C	0.63
FUN36	YAL011W	RVB1	YDR190C	0.989
FUN36	YAL011W	SWR1	YDR334W	0.99
FUN36	YAL011W	YDR485C	YDR485C	0.989
FUN36	YAL011W	ARP4	YJL081C	0.99
FUN36	YAL011W	ARP6	YLR085C	0.987
FUN36	YAL011W	YML041C	YML041C	0.99
FUN36	YAL011W	RVB2	YPL235W	0.988
TPD3	YAL016W	PPH21	YDL134C	0.99



Challenges

- Distribution of data
- System Administration
- Networking
- Graphing through Cached Data

Conclusion

- The ability to work offline ensures preservation of data and adding new data any time the application is accessed.
- Users can adjust and create new entries for on going projects.

Future Plans

- Add sign-in functionality and accounts
- Add more interactivity to the database such as graphs.