Prototipo de mobile app con MongoDB Realm. Caso de estudio: American Touring

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*Abstract*—Desde la aparición de los sistemas operativos Android e IOS, las aplicaciones móviles han sido muy utilizadas por las empresas, en especial para el campo del ecommerce debido a su fácil accesibilidad, interconectividad y mejoramiento de la experiencia de usuario por adquirir o utilizar algún producto o servicio. La implementación de mobiles app ofrece ciertos beneficios como rentabilidad, tener mejor posicionamiento, innovación, mayor ventaja competitiva, retención de clientes entre otros beneficios [1] y para el desarrollo de estas aplicaciones móviles existen diversas tecnologías como Ionic, ReactJS, Angular pero estas tecnologías solo cubren la parte de desarrollo más no la interacción con los endpoints de servicios, ni seguridad ni escalabilidad [2], siendo estos aspectos una labor adicional por parte de los desarrolladores y arquitectos de software y actualmente con la inclusión del almacenamiento en la nube nació una nueva alternativa que es MongoDB Realm que ofrece SDKs para el desarrollo ágil de aplicaciones móviles y una interacción directa desde el cliente con MongoDB Atlas y sus endpoints [3].

Por tal motivo, en este artículo se desarrollará un prototipo de aplicación móvil utilizando la arquitectura de MongoDB Realm para solventar las necesidades de la empresa de viajes American Touring.

Keywords—MongoDB Realm, SDK, MongoDB Atlas, escalabilidad, mobile app.

# Introducción

En el año 2017, la empresa Furry Analytics realizó una investigación sobre la usabilidad de las aplicaciones móviles en los usuarios, mostrando resultados interesantes como el tiempo en que los usuarios pasan conectados en sus dispositivos móviles, siendo un promedio de cinco horas diarias, registrándose ganancias de 76 mil millones de dólares de ingresos a las empresas dueñas de estas aplicaciones [4], demostrando la rentabilidad que ofrecen las apps para las empresas. Por tal motivo, la implementación de las aplicaciones móviles en cada uno de los modelos de negocio en las empresas es una inversión primordial para el crecimiento de las mismas.

En la actualidad, muchas empresas optan por utilizar las redes sociales como medio de interacción con sus usuarios [5] o por utilizar algún software existente del mercado, pero existe un alto índice de empresas que no conocen o no se animan a desarrollar e implementar sus propias aplicaciones, dado a los altos costos de desarrollo y mantenimiento del mismo, tal y como lo detalla el autor [6].

Pero las empresas que si se animan a tener sus propias aplicaciones se encuentran con otras problemáticas durante el desarrollo de aplicaciones móviles como son la escalabilidad, costos, seguridad, interoperabilidad y compatibilidad de aplicaciones y aunque actualmente ya existen maneras de solventar estas problemáticas, el costo económico en cuestión laboral y computacional para darle solución siguen siendo demasiados altos [7].

Una propuesta de solución para la problemática de costos y escalabilidad es MongoDB Realm, su arquitectura simplifica y minimiza el tiempo para desarrollar aplicaciones tanto webs como móviles, esto se debe a que Realm proporciona a los programadores algunos SDK, entre ellos se destacan React, Kotlin y Swift, con las API’s necesarias para realizar conexiones directas desde el frontend hacia MongoDB e interactuar con varios de los servicios ofrecidos por esta tecnología como Realm Functions y Realm GraphQL [8].

El objetivo principal de esta investigación es la de desarrollar un prototipo de desarrollo de apps utilizando MongoDB Realm para la empresa American Touring que requiere migrar su modelo de negocio hacia las nuevas tecnologías, siendo la utilización de mobiles apps una de ellas.

El siguiente trabajo está estructurado primeramente por el resumen y la introducción que dan las pautas iniciales sobre que se tratará la investigación, seguido del aparto II denominado marco teórico donde se detalla la teoría con la cual se sustentará la investigación, en el apartado III denominado desarrollo y resultados se presentará la propuesta de solución, finalizando con las conclusiones y bibliografía.

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*a**b* 

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