

TASK 4 ABSTRACT

1. English Abstract

This presentation introduces "QueueTrack," a mobile-based fleet management application designed to solve the persistent challenges of chaos, unfairness, and lack of data in Kenya's public transport (Matatu) sector. By transitioning from manual chalk-and-blackboard systems to a digital platform, QueueTrack utilizes Flutter for cross-platform interfaces and Firebase for real-time cloud computing to manage vehicle queues transparently. The system features dual dashboards: one for vehicle owners to assign drivers and another for SACCO officials to monitor fleet statistics and stage marshals. This innovation not only restores order and reduces corruption at terminals but also generates critical data insights for government policy and urban planning. Ultimately, QueueTrack demonstrates how indigenous software solutions can drive Kenya's digital transformation and Smart City goals.

2. Kiswahili Abstract (Muhtasari)

Wasilisho hili linatambulisha "QueueTrack," mfumo wa kisasa wa simu ulioundwa kutatua changamoto za vurugu, upendeleo, na ukosefu wa takwimu katika sekta ya Matatu nchini Kenya. Badala ya kutumia njia za kizamani za kuandika kwa chaki, QueueTrack inatumia teknolojia ya Flutter na Firebase kuweka utaratibu wa wazi wa kupanga foleni za magari kwa wakati halisi. Mfumo huu una sehemu mbili kuu: moja ya wamiliki wa magari kusajili madereva, na nyingine ya viongozi wa SACCO kusimamia takwimu za magari na wahudumu wa vituoni. Ubunifu huu haaleti tu utaratibu na kupunguza ufisadi vituoni, bali pia unatoa takwimu muhimu kwa serikali kwa ajili ya mipango ya miji. Hatimaye, QueueTrack inathibitisha jinsi suluhu za kiteknolojia za ndani zinavyoweza kuchangia katika maono ya Kenya ya uchumi wa kidijitali.

3. Kikuyu Abstract

Ūhoro ūyũ wĩaheana "QueueTrack," ūrĩa nĩ kũgĩrĩrwo gĩtua mathina marĩa maikaragia mũno ta kĩhuhũ, wendo mũgĩkũyũ, na kũgĩtũkĩra kwa maũndũ marĩa matareherekanwo ūthoini wa mũhoro wa andũ a matatu Kenya. Kũrĩa nĩ kũrĩ ūrũgendo kũmwe kũrĩa kũgĩa na mũthenya ya gũcoka handũ ha mbarathi na thaathi ya chalk na blackboard, QueueTrack nĩ ĩkũhũthĩte Flutter gĩtua wĩra wa kuria ma-interfaces marĩ cross-platform, na Firebase gĩtua ūhoro wa real-time cloud computing wakuheana wendo wa magũrũ ma matatu na ūthĩrĩgĩrĩrwo wa maitho. System ĩno ĩkũhũthĩtie dashboards igiri: imwe ya andũ a magũrũ (vehicle owners) gĩtuma na gũheana drivers, na ĩngĩ ya andũ a SACCO gũkũrũkĩra statistics na marũgamo a stage marshals. Ūhoro ūyũ mũnene ūgĩkũyũ nĩtũta ūtonga na wendo mũno, ūgĩtua kũhũthĩrĩria ūkũrũ na kũhitha ūrĩa ūthĩrĩgĩrĩrwo wĩa matatu kũrĩa matũũra-inĩ, na ūkĩgĩa data mũno ĩrĩa ĩthiia gĩtũma mũtugo ya

bũrũri na urban planning.Kwa ũhoro mũgima, QueueTrack nĩ wendo ũrĩa ũgĩtua kũmenya atĩ maũndũ marĩa matuĩtwo Kenya mũno, nĩmo matũhĩrĩria gũthomithia ũhoro wa digital transformation na Smart City goals.