

ABSTRAK

Apartemen adalah salah satu hunian berdesain rumah susun namun telah dilengkapi dengan berbagai fasilitas dan pelayanan mewah, ekonomis dan praktis yang dapat menunjang kemudahan hidup. Tempat parkir adalah salah satu bagian penting dalam apartemen, mengingat hampir seluruh penghuni apartemen memiliki kendaraan pribadi khususnya mobil. Untuk menjaga keamanan dan kenyamanan penghuni apartemen, pihak pengelola apartemen dituntut untuk memberikan desain yang terbaik, baik dalam tata ruang maupun teknologi untuk layanan parkir. Tempat parkir dalam suatu apartemen biasanya berada di bagian basement, dan untuk loading dock berada di basement dimana posisi portal dengan petugas berjauhan. Untuk mempermudah dan efisiensi waktu serta tenaga kerja, peneliti merancang prototipe kontrol portal parkir berbasis arduino dengan komunikasi melalui laser dan infrared. Hasil pengujian secara implementasi menemukan formula baru dalam dunia parkir yaitu, ketika *push button* di tekan sinar laser mengirim inputan ke sensor penerima laser, buzzer berbunyi untuk menjalankan motor servo untuk membuka portal dan infrared mendeteksi kendaraan. Jika sudah melewati sensor infrared maka portal menutup. Saat ini teknologi sudah semakin canggih, jadi petugas parkir tidak harus menghampiri ke basement, cukup menekan *push button* yang berada di pos. Dimana tombol dapat mengirim sinyal kepada portal yang telah dilengkapi dengan wireless optical.

Kata Kunci : Apartemen, Parkir, Arduino, Push Button, Laser, Buzzer, Portal, Infrared

ABSTRACT

The apartment is one of the residential design, but has been equipped with various facilities and services of luxury, economical and practical that can support the convenience of life. The parking lot is one of the important parts in the apartment, considering that almost all the residents have private vehicles, especially cars. To maintain the safety and comfort of the apartment occupants, the apartment managers are required to provide the best design, both in the spatial and technology for the parking service. Parking space in an apartment is usually located in the basement, and for loading the dock is in the basement where the position of the portal with the officers far apart. To facilitate and efficiency of time as well as manpower, researchers devise the control of Arduino-based parking portal controller with communication via laser and infrared. The results of an implementation test found a new formula in the world of parking ie, when the push button in the laser beam pressed the input to the laser receiver sensor, the buzzer reads to launch the servo motor to open the portal and infrared detects Vehicles. If you have visited an infrared sensor then the portal closes. Nowadays the technology is increasingly sophisticated, so the parking clerk does not have to approach to the besment, just press the push button that is in the post. Where the button can send a signal to the portal that has been equipped with wireless optical.

Keywords: Apartment, Parking, Arduino, Push Button, Laser, Buzzer, Portal, Infrared