MUSICAL INSTRUMENT RENTAL SYSTEM

DISUSUN OLEH

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PROGRAM STUDI INFORMATIKA

FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

UNIVERSITAS SEBELAS MARET

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MUSICAL INSTRUMENT RENTAL SYSTEM

1. **Description of Project Background**

Nowadays, we always hear music everytime, anywhere. People make their original song and new track coming out everyday. Their even spend their money for some expensive musical instrument and stuff for their music. But, there are some people who can't buy their own instrument for some financial reason yet they are also have willing to have those stuff. Or there are some organization that want to hold a concert or live band music but they don't have the instrument. Therefore, formed an idea to facilitate those who want to play music without having to buy it and be able to have it for a few moments.

2. **Project Goals**

The goal of this research is to provide web application software that will automate the booking process of the company and be able to store information in a single database.

3. **Stakeholders**

i. Admin ➡ Admin is an actor who plays an important role in the rental system starting from the making of rent. Admin role to manage the system in accordance with the needs and features that have been provided.
ii. Customer ➡ Customer is an actor who makes a rental using an established rental system. Customers can also search for musical instruments and make a rentals in this system.

4. **Functional Requirements**

i. System should view all available rental instrument and connects with database to call all instrument and display them accordingly
ii. User can search for desired musical instrument by brand, type and cost. A search bar will be implemented on the website that will search the site based on input.
iii. System should be able to store equipment booking transaction, musical instrument details and specifically in managing all the records.
iv. System should be able to print musical instrument booking and transaction record.
v. System can view, add, edit and delete of all the system record.

5. Non-Functional Requirements

i. User Friendliness

This system should be user-friendly because not all end users will be that much technically expert in using the system. This must be easy to manipulate so that each of them must be very comfortable to use.

ii. Secure

Security is also important because it is to ensure the integrity of the system from malicious damage. The stakeholder accounts of musical instrument rental system are secured because it is protected by their own username and password.

iii. Reliability

If it is unreliable, this will surely failed frequently that's why the system must be reliable so that the end users will avoid of having trouble in using the system and is capable to maintain its performance over time.

iv. Performance

Can be open in Chrome / firefox Less than 15 second.

6. Method used in requirement gathering

i. Survey around UNS area, and then Surakarta region.

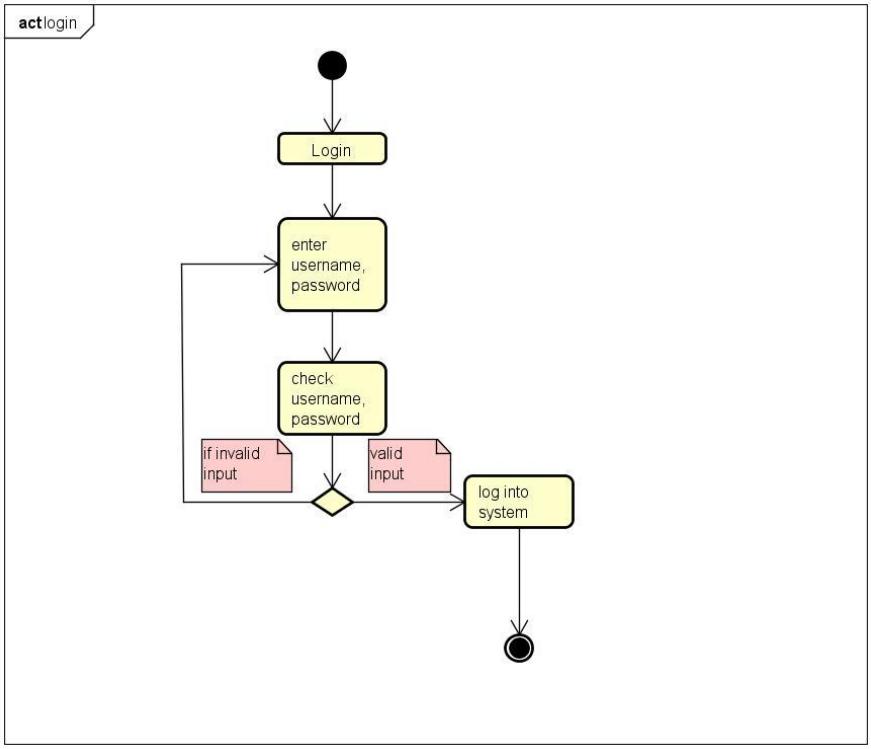
ii. Interviews UNS students, people around UNS, and then people in Surakarta.

7. Software Development Model

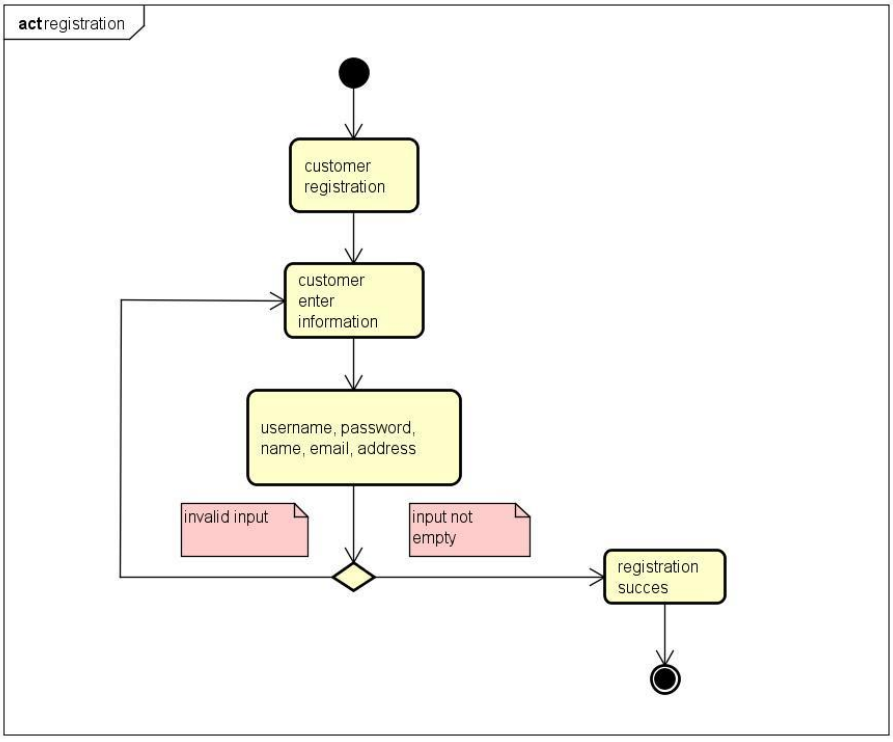
We use Agile model because there are function that may include after the program released, not release together, but step by step depends on circumstances.

8. Activity diagram

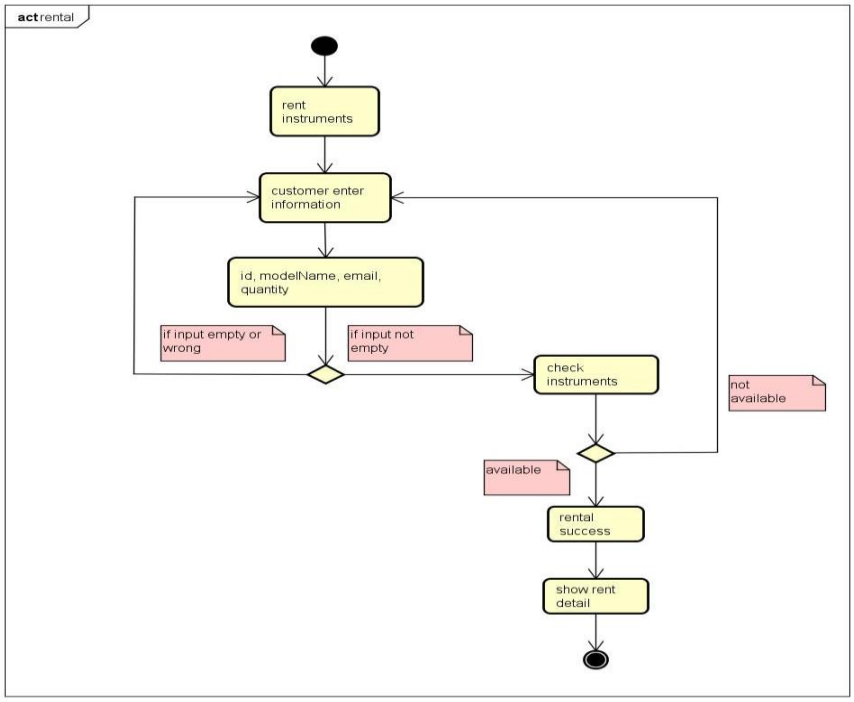
i. Login



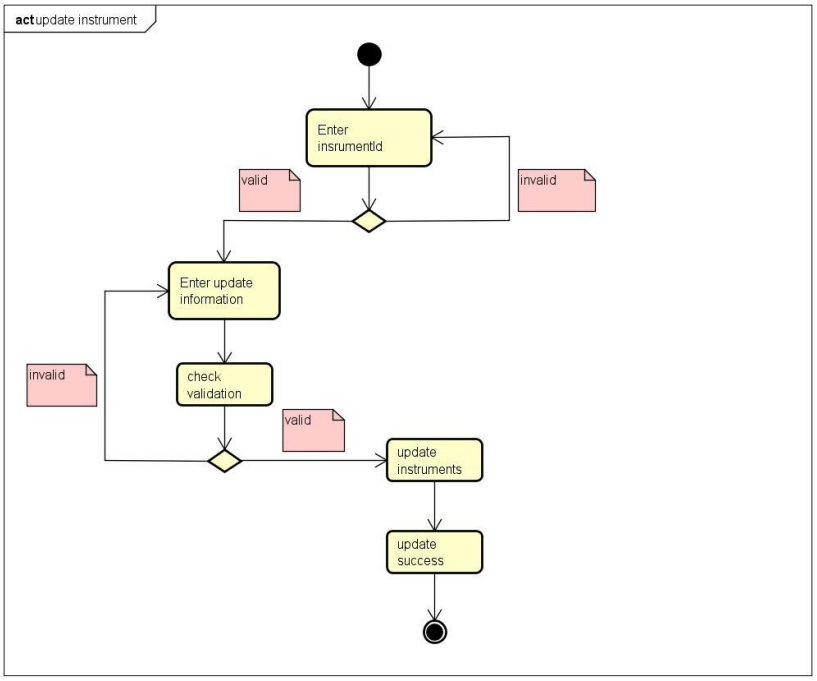
ii. Registration



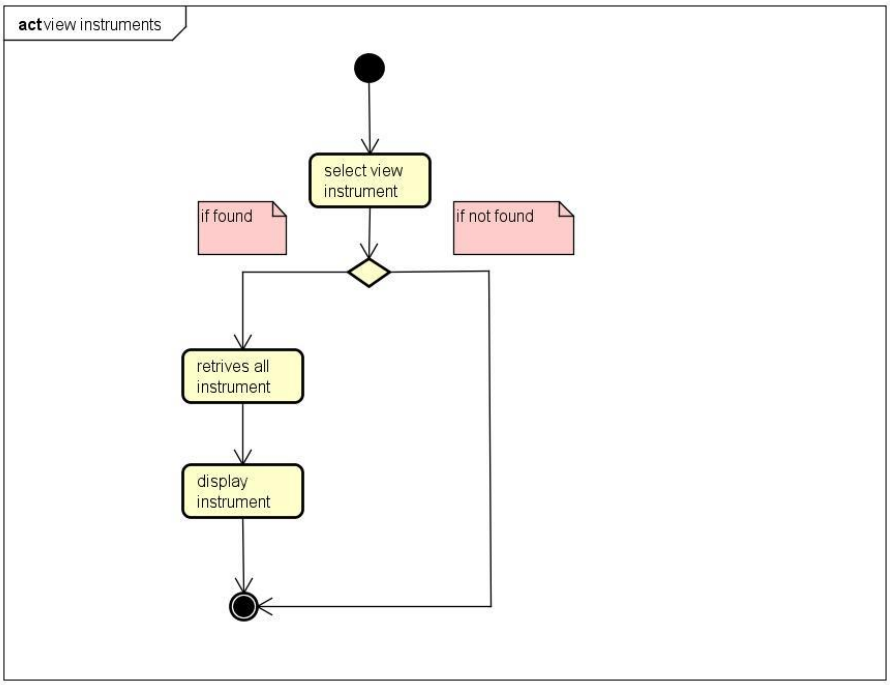
iii. Rental



iv. Update Instrument



v. View Instrument



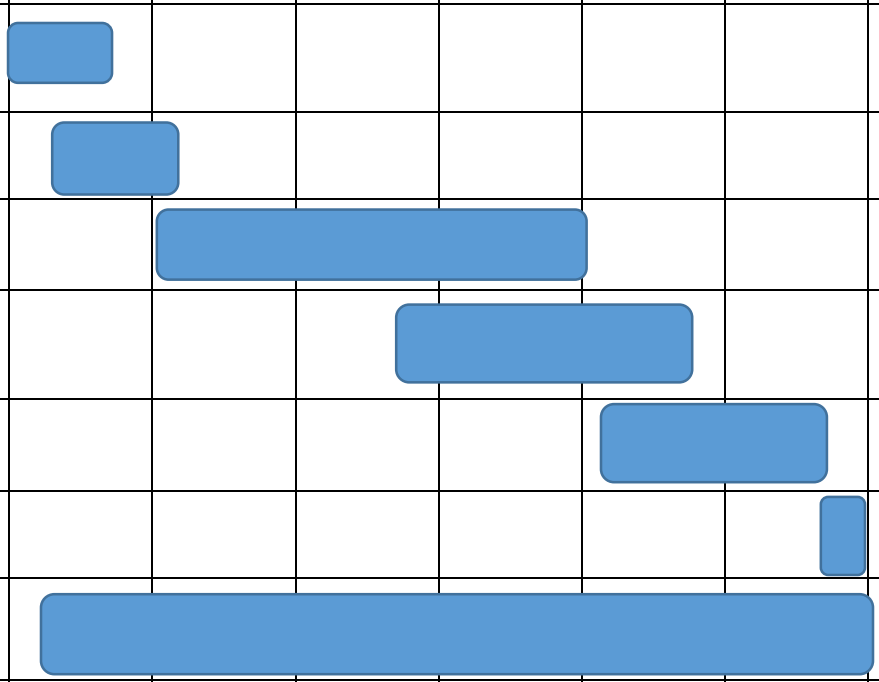
9. Use case Diagram

10. Use case description

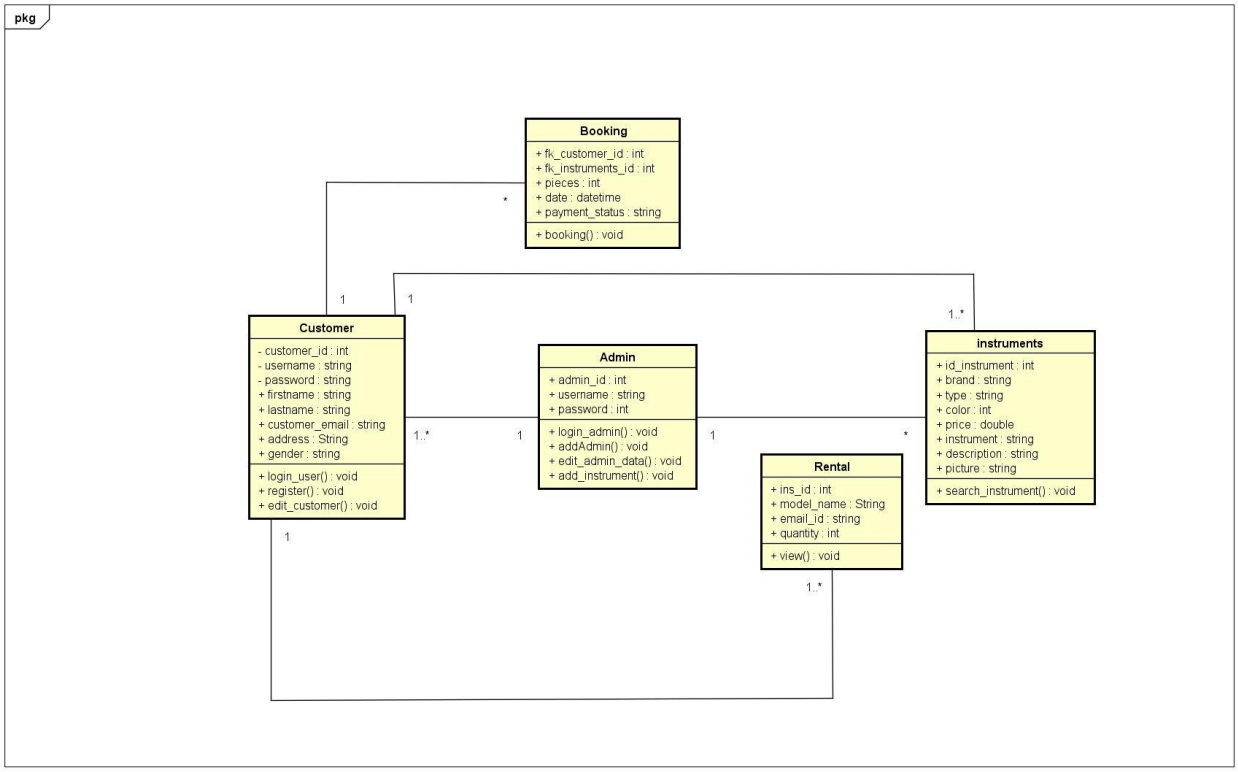
- Admin manage all the details booking that customer input.
- There is a search bar in the system
- System presents the all instrument that related to the search.
- Admin also can check a rent.
- There is button for update the detail of instrument and add the instrument
- Customer have to registration first,
- There is a search bar in the system
- Customer can search the instrument by the brand, type, or cost range.
- System presents the all instrument that related to the search
- Customer pick and then booking a instrument.
- Customer rent it
- System show the full information of the instrument
- System show the transaction detail

11. Project Schedule and Effort Plan

Development Phase	0 – 15 Day	16 – 30 Day	31 – 45 Day	46 – 60 Day	61 – 75 Day	76 – 90 Day	Duration
Requirement Gathering							10
Analysis							15
Design							30
Coding							25
Testing							12
Implementation							08
Documentation							80
Total Days							90

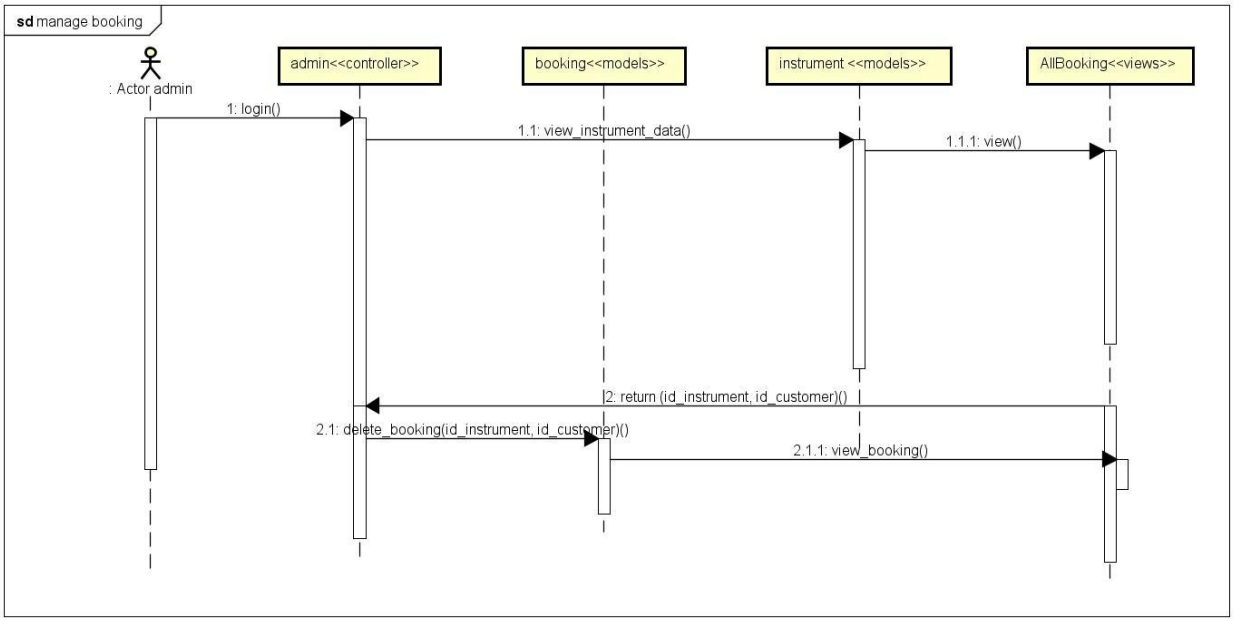


12. Class Diagram

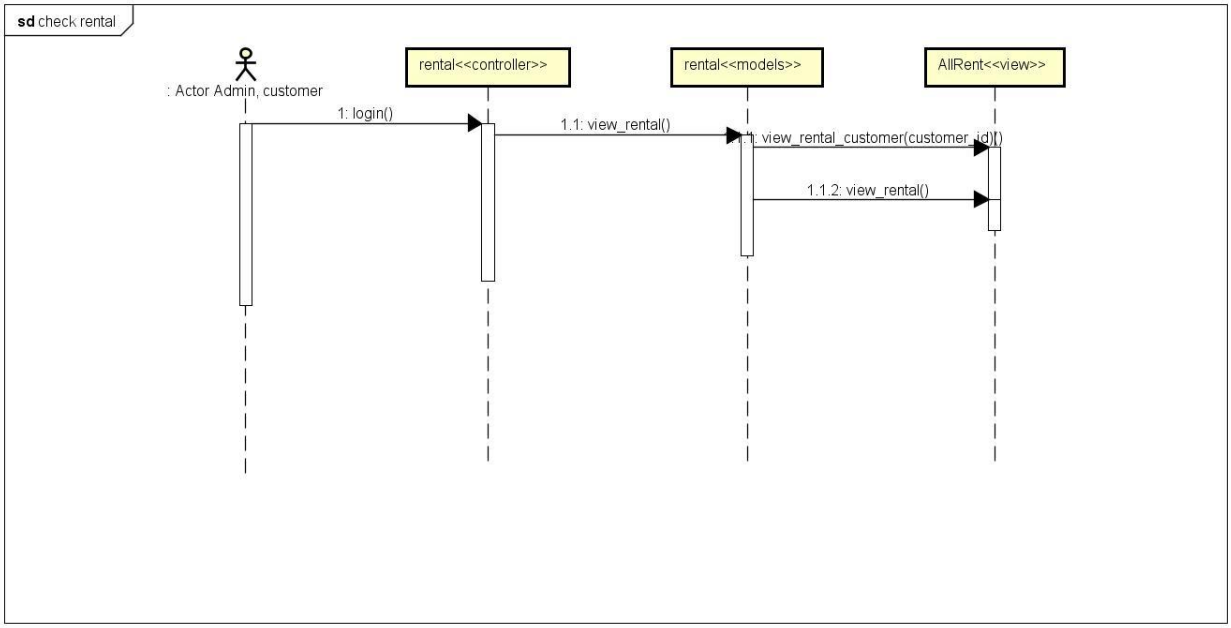


13. Sequence Diagram

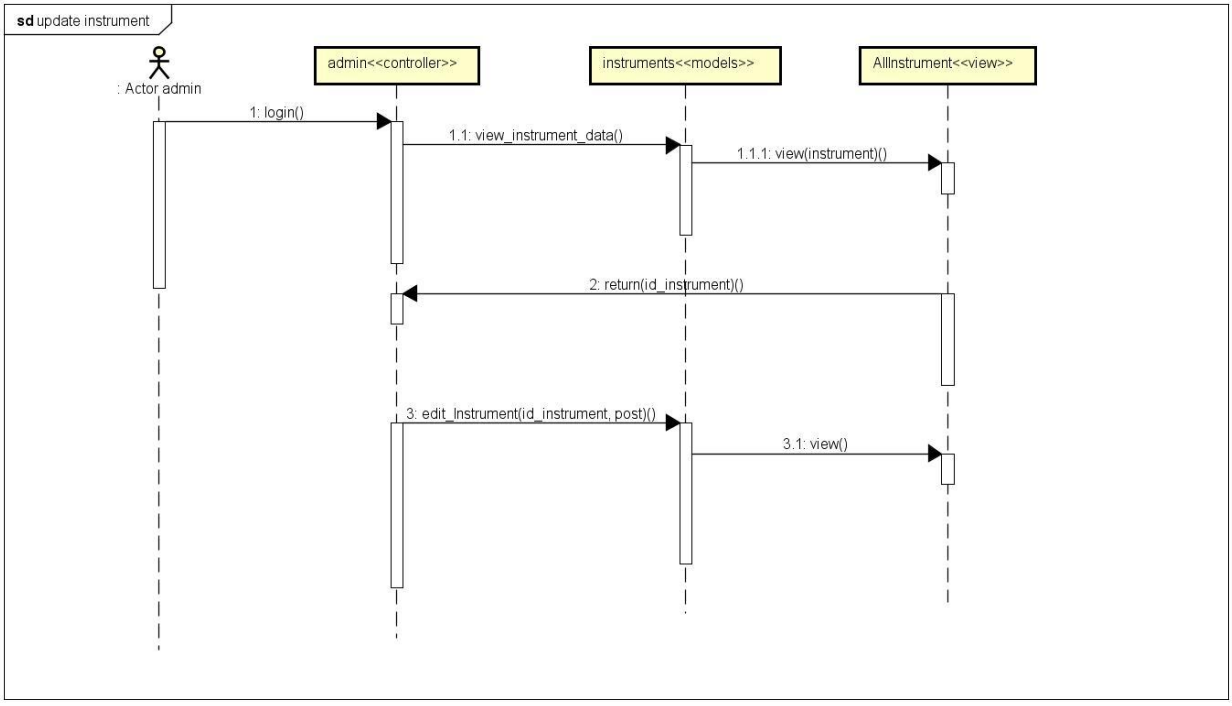
a. Manage Booking



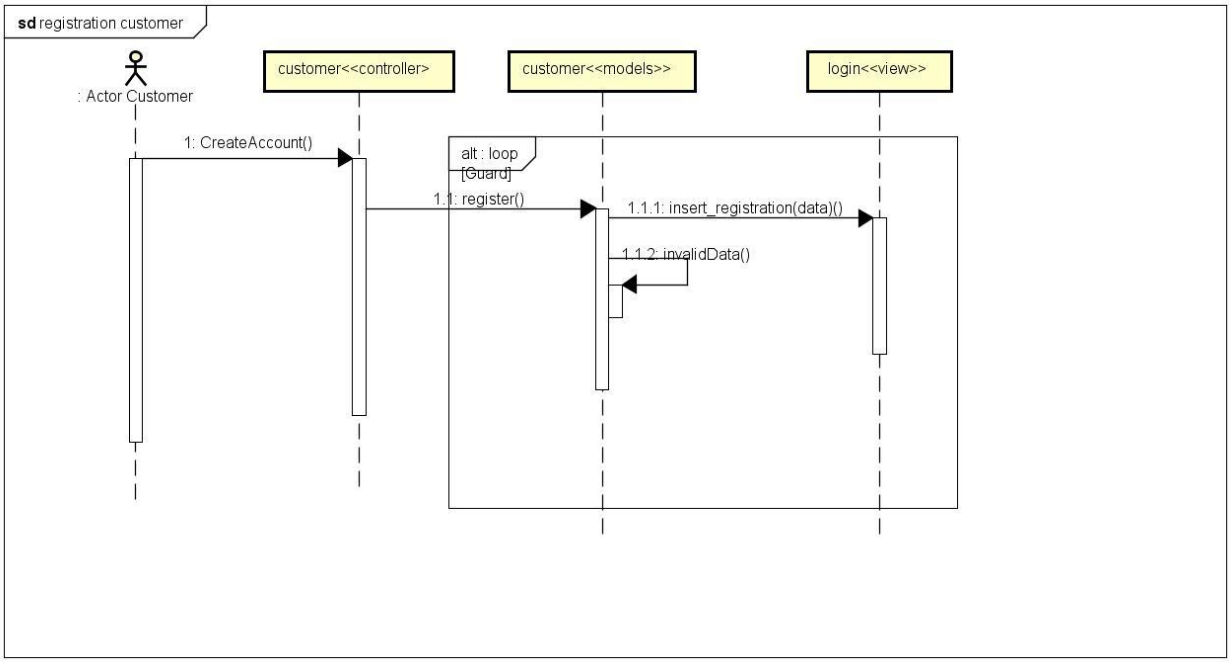
b. Check Rental



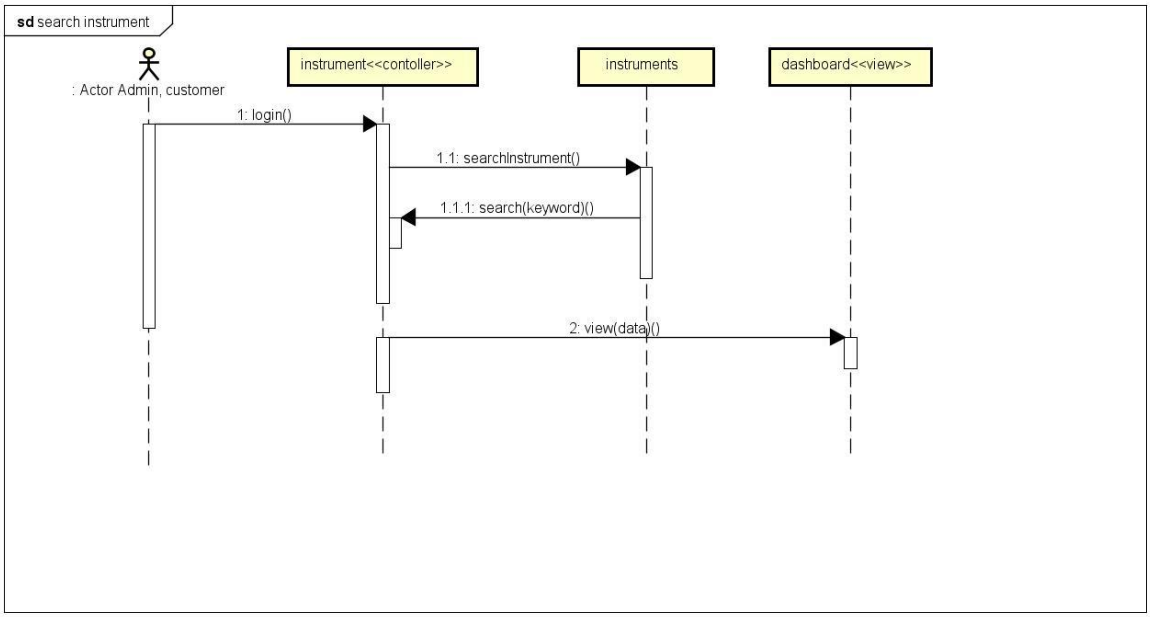
c. Update detail Instruments



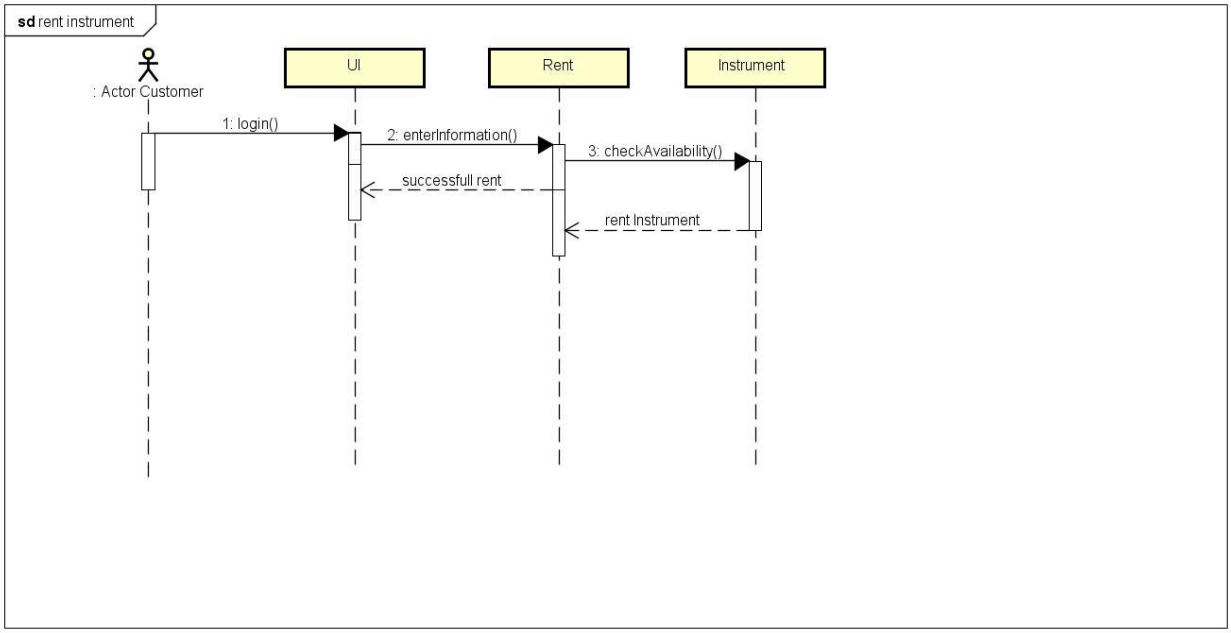
d. Register



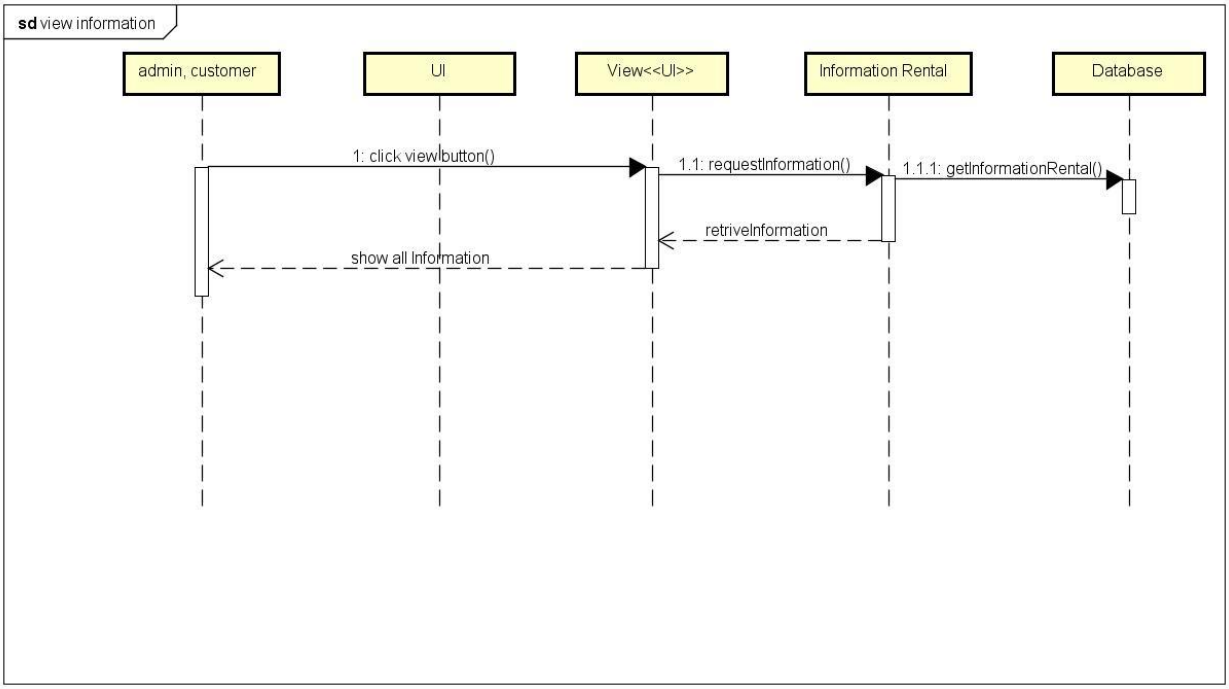
e. Search Instrument



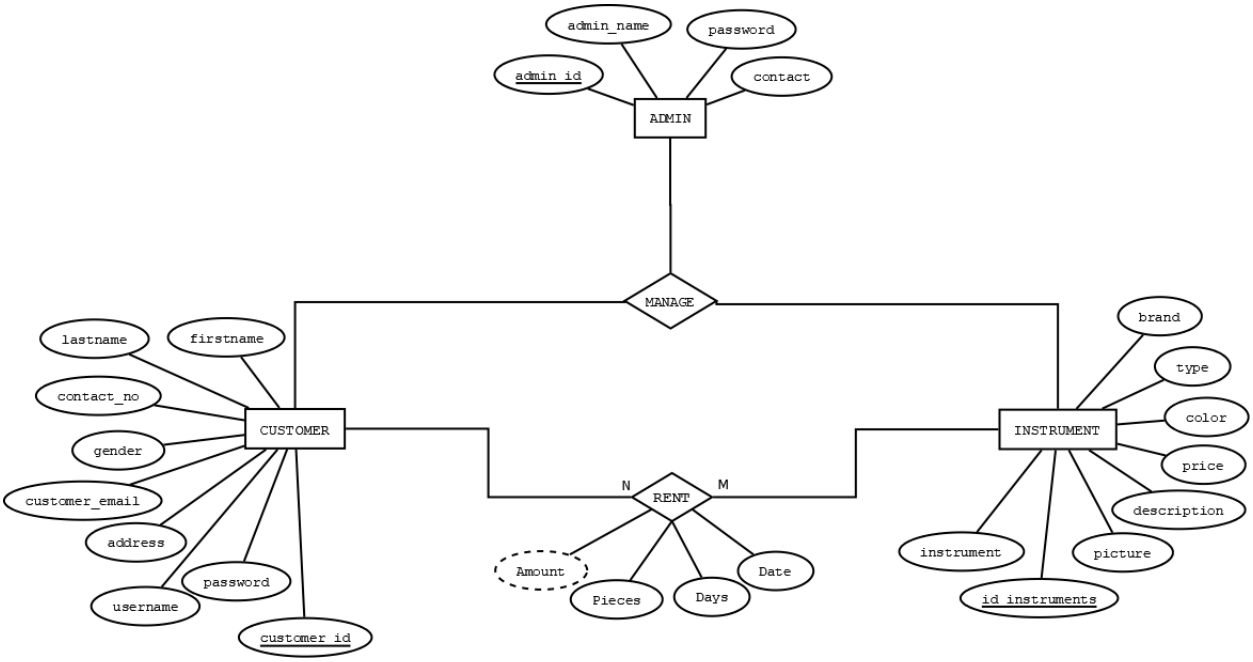
f. Rent Instrument



g. View Information



14. Data Design, beserta tabel dictionary



admin

Column	Type	Null	Default	Links to	Comments	MIME
admin_id *(Primary)*	int(1)	No				
admin_name	varchar(24)	No				
password	varchar(6)	No				
contact	varchar(12)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	admin_id	4	A	No	

booking

Column	Type	Null	Default	Links to	Comments	MIME
fk_customer_id	int(3)	No		customer -> customer_id		
fk_instruments_id	int(3)	No		instrument -> id_instrument		
pieces	int(11)	No				
date	datetime	No				
days	int(1)	No				
status	int(1)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
fk_customer_id	BTREE	No	No	fk_customer_id	3	A	No	
fk_instruments_id	BTREE	No	No	fk_instruments_id	3	A	No	

customer

Column	Type	Null	Default	Links to	Comments	MIME
customer_id *(Primary)*	int(3)	No				
firstname	varchar(20)	No				
lastname	varchar(20)	No				
contact_no	bigint(12)	No				
gender	text	No				
customer_email	varchar(40)	No				
address	varchar(50)	No				
username	varchar(8)	No				
password	varchar(10)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	customer_id	2	A	No	

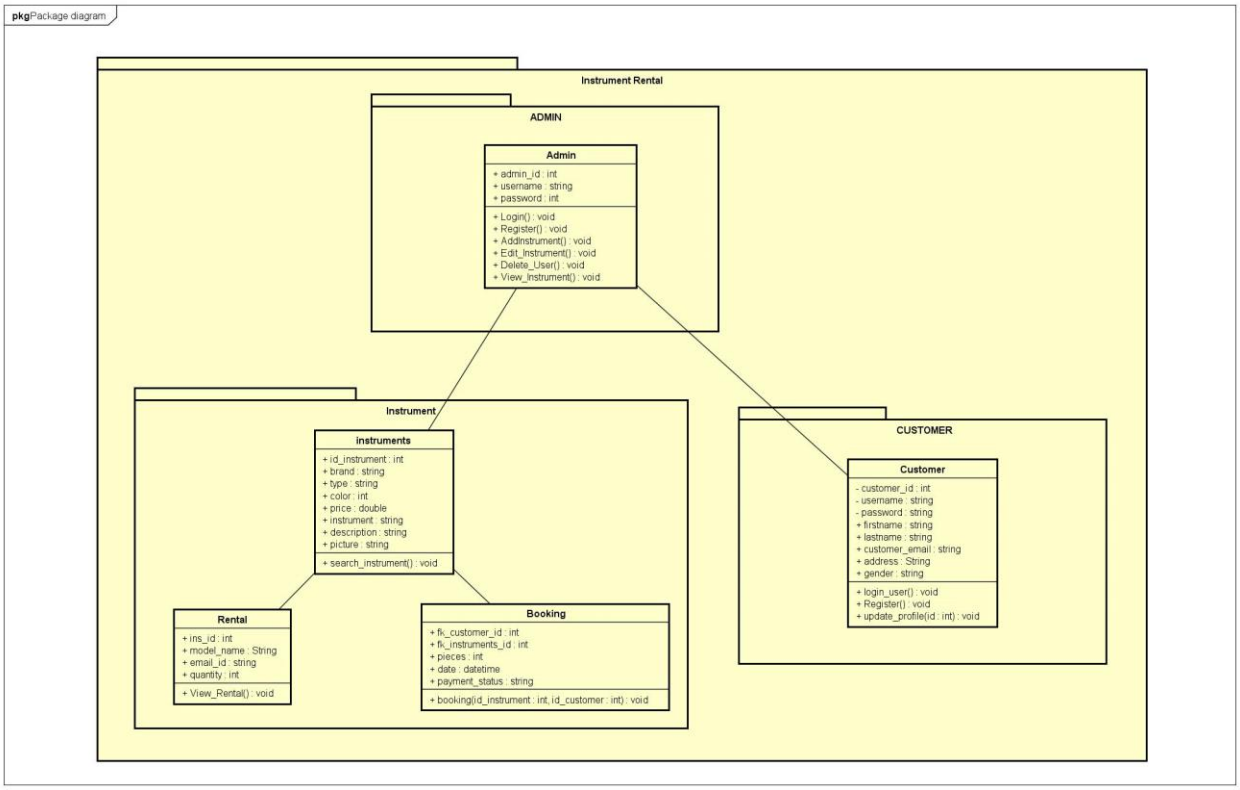
instrument

Column	Type	Null	Default	Links to	Comments	MIME
id_instrument *(Primary)*	int(3)	No				
instrument	varchar(20)	No				
brand	varchar(20)	No				
type	varchar(50)	No				
color	varchar(20)	No				
price	int(6)	No				
picture	varchar(40)	No				
description	varchar(5000)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id_instrument	25	A	No	

15. Package Diagram



16. Testing

1.1 TEST PLAN

#	Kelas Uji	Test for	Testing Methods	Identifications
1	Register	Pengujian pendaftaran	Black Box	U-001
2	Manage Booking	Pengujian fungsi menguruskan tempahan	Black Box	U-002
3	Search Instrument	Pengujian fungsi pencarian alatan	Black Box	U-003
4	Booking a Instrument	Pengujian fungsi membuat tempahan alatan.	Black Box	U-004
5	Rent a Instrument	Pengujian fungsi menyewa alatan.	Black Box	U-005
6	Check rent	Pengujian fungsi checking rental	Black Box	U-006
7	Add Instrument details	Pengujian fungsi Menambah Data Alatan	Black Box	U-007
8	View the Information	Pengujian fungsi memaparkan informasi.	Black Box	U-008

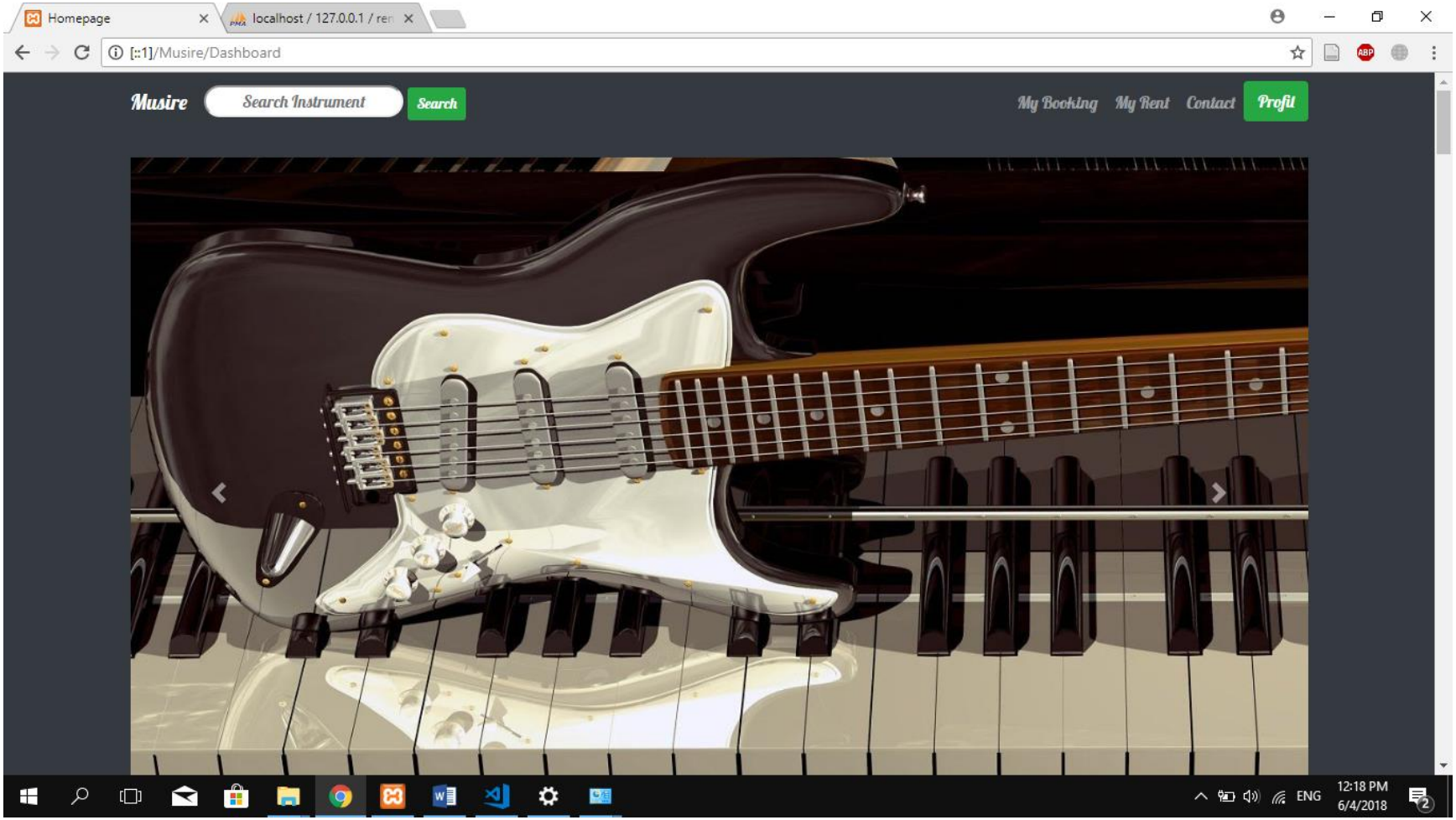
1.2 TEST PROCEDURE

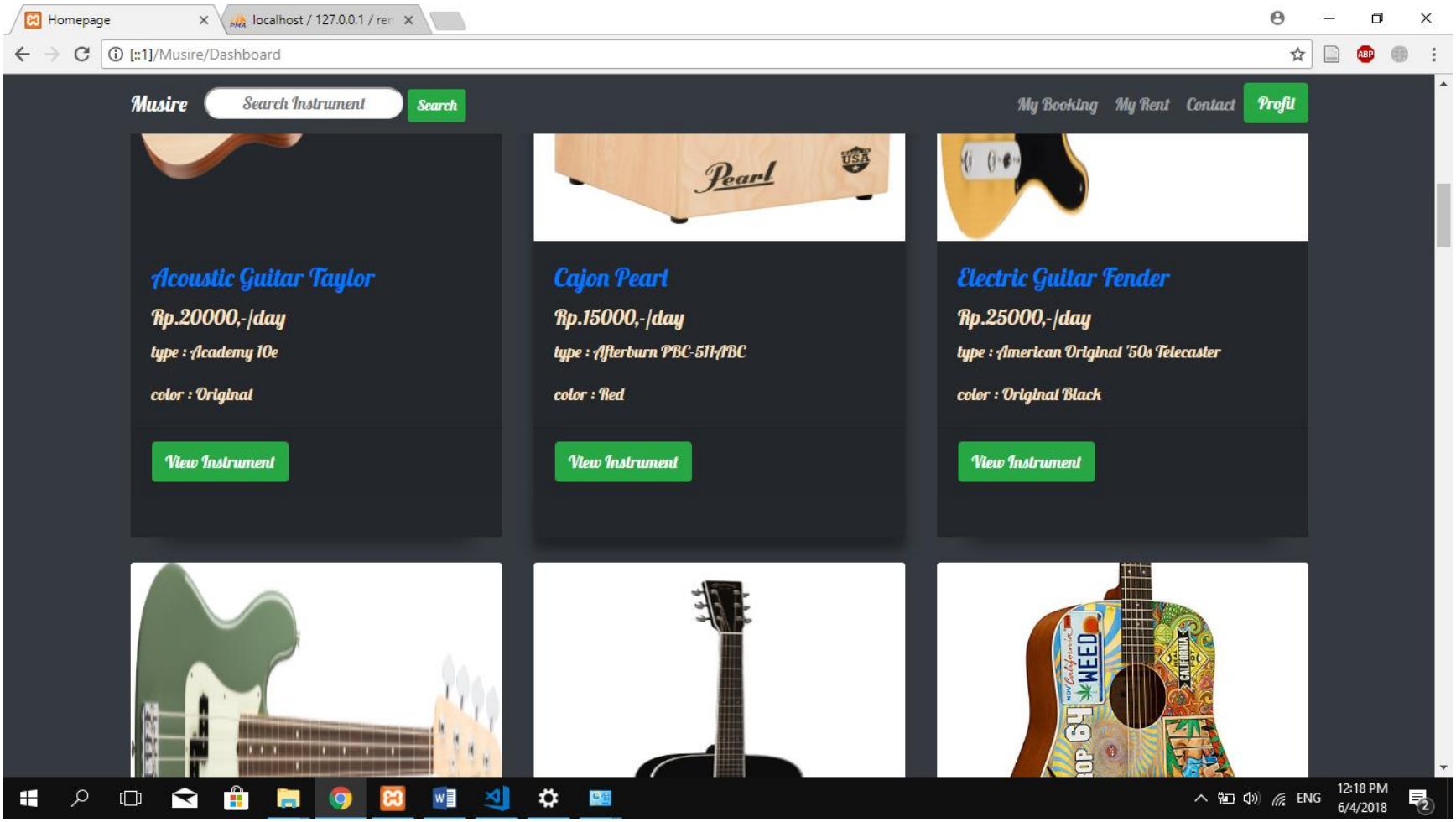
Identifikasi	Deskripsi	Prosedur Pengujian	Masukan	Keluaran yang Diharapkan	Hasil yang didapat	Kesimpulan
U-001	Pengujian pendaftaran	Jalankan browser. Masukkan alamat: localhost/projek dalam browser. Masukkan input yang diminta dengan batasanbatasan yang telah ditentukan. Klik link yang terdapat pada halaman tersebut	Memasukkan username, nama lengkap, nombor telefon, alamat, dan email ke field yang tersedia	Ada message box untuk keberhasilan pembuatan user	Sukses	Diterima
U-002	Pengujian fungsi menguruskan tempahan			Menghapus data	Sukses	Diterima
U-003	Pengujian fungsi pencarian alatan		Memasukkan nama alatan.	Data akan memaparkan alatan yang dicari.	Sukses	Diterima
U-004	Pengujian fungsi membuat tempahan alatan.		Memasukkan jumlah alatan, tanggal, dan jangka waktu pinjam	Pop up “Booking berhasil”	Sukses	Diterima

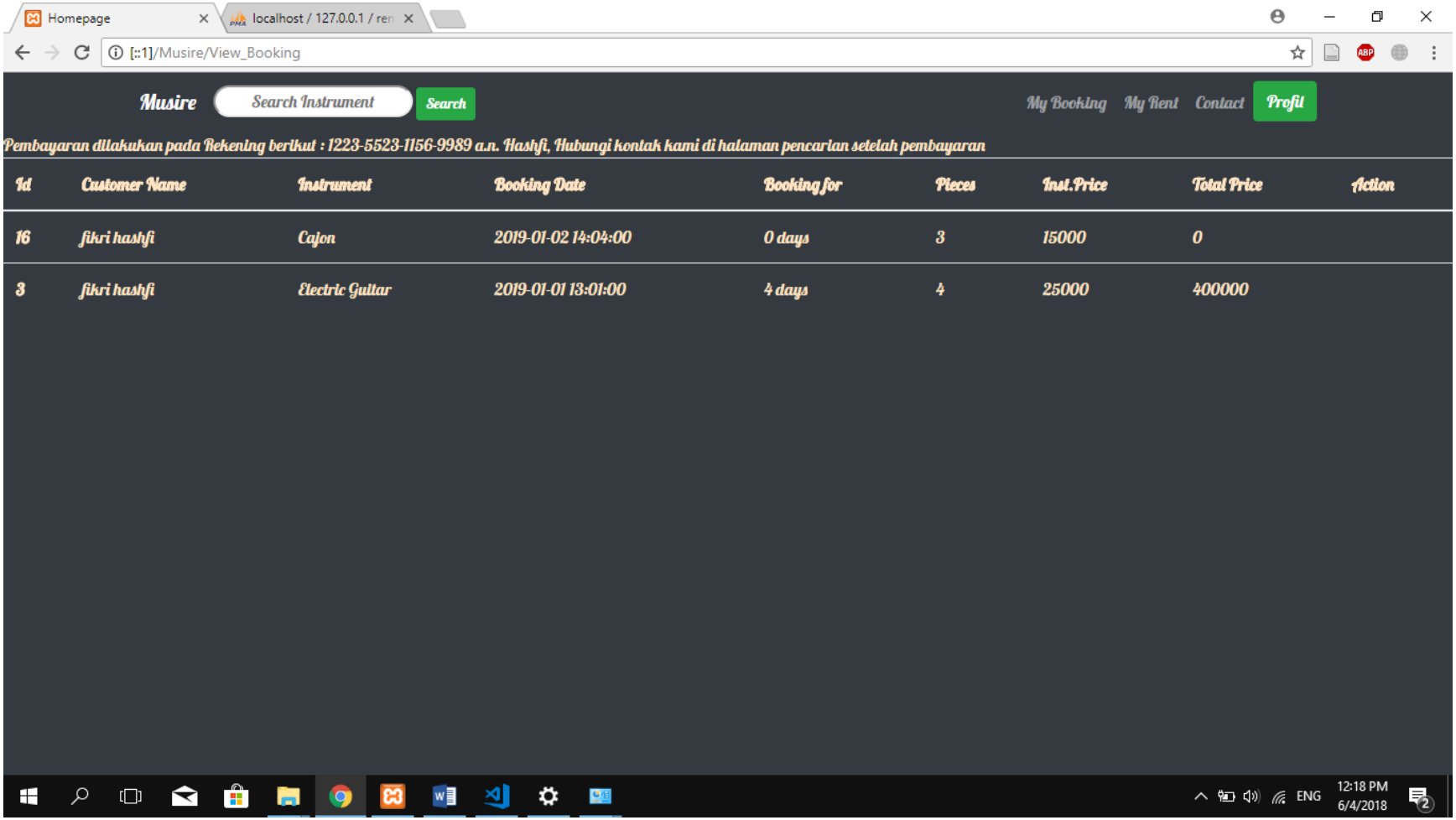
U-005	Pengujian fungsi menyewa alatan.		Jumlah, tanggal, jangka waktu pinjam		Sukses	Diterima
U-006	Pengujian fungsi checking rental			Mengeluarkan data instrument rental.	Sukses	Diterima
U-007	Pengujian fungsi Menambah Data Alatan		Instrument, brand, color, type, description, price, picture	Pop up”Instrument berhasil ditambahkan”	Sukses	Diterima
U-008	Pengujian fungsi memaparkan informasi.			Menampilkan semua data alatan.	Sukses	Diterima

Lampiran Sistem

Lampiran user




Homepage
localhost / 127.0.0.1 / ren
[::1]/Musire/Dashboard
Musire
Search Instrument
Search
My Booking
My Rent
Contact
Profil
Acoustic Guitar Taylor
Rp.20000,-/day
type : Academy 10e
color : Original
View Instrument
Cajon Pearl
Rp.15000,-/day
type : Afterburn PBC-511ABC
color : Red
View Instrument
Electric Guitar Fender
Rp.25000,-/day
type : American Original '50s Telecaster
color : Original Black
View Instrument
ENG
12:18 PM
6/4/2018


Homepage
localhost / 127.0.0.1 / ren
[::1]/Musire/View_Booking
Musire
Search Instrument
Search
My Booking
My Rent
Contact
Profil
Pembayaran dilakukan pada Rekening berikut : 1223-5523-1156-9989 a.n. Hashfi, Hubungi kontak kami di halaman pencarian setelah pembayaran
Id
Customer Name
Instrument
Booking Date
Booking for
Pieces
Inst.Price
Total Price
Action
16
fikri hashfi
Cajon
2019-01-02 14:04:00
0 days
3
15000
0
3
fikri hashfi
Electric Guitar
2019-01-01 13:01:00
4 days
4
25000
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ENG
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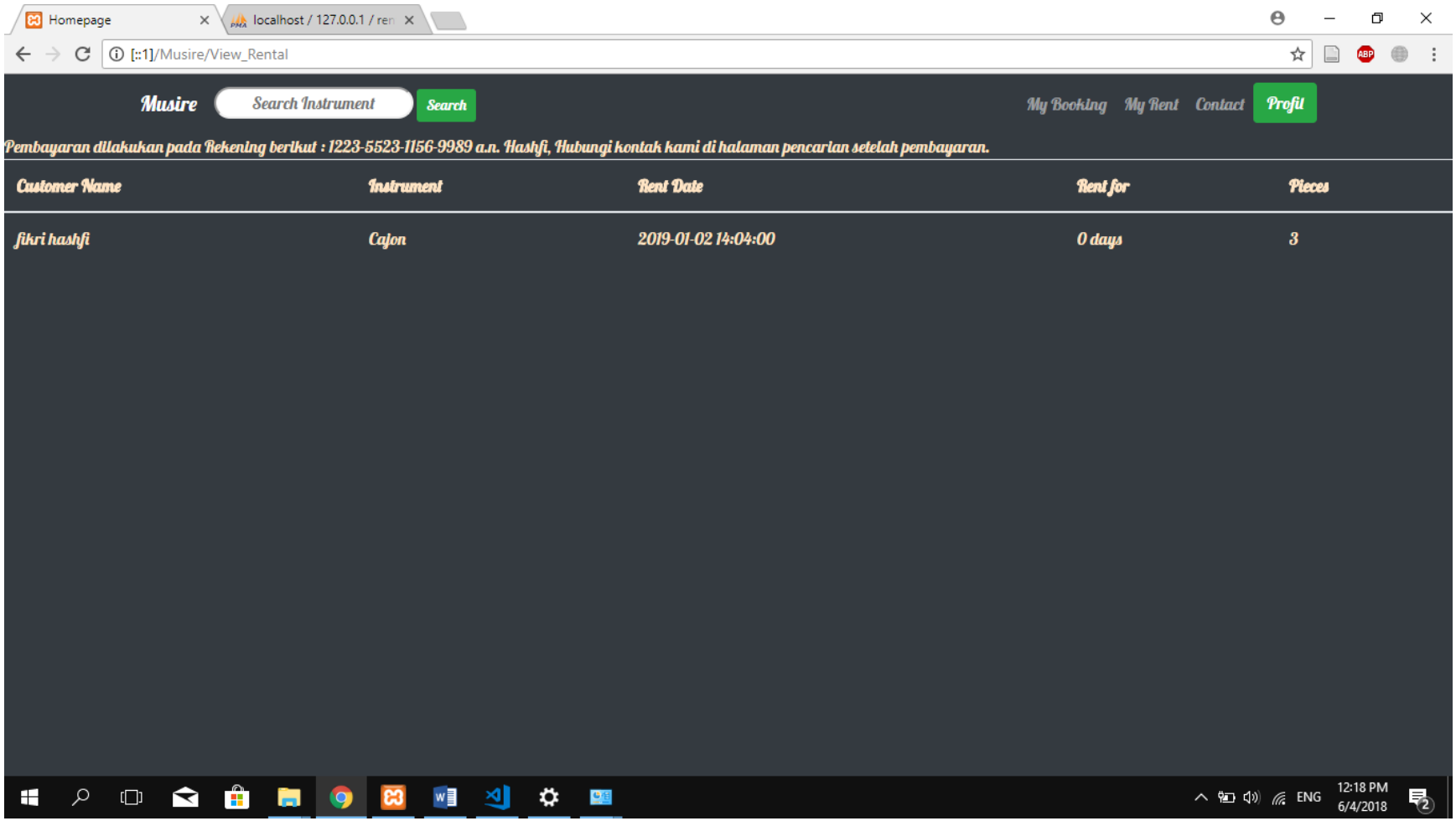
Homepage
localhost / 127.0.0.1 / ren
[::1]/Musire/View_Rental
Musire
Search Instrument
Search
My Booking
My Rent
Contact
Profil
Pembayaran dilakukan pada Rekening berikut : 1223-5523-1156-9989 a.n. Hashfi, Hubungi kontak kami di halaman pencarian setelah pembayaran.
Customer Name
Instrument
Rent Date
Rent for
Pieces
fikri hashfi
Cajon
2019-01-02 14:04:00
0 days
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ENG
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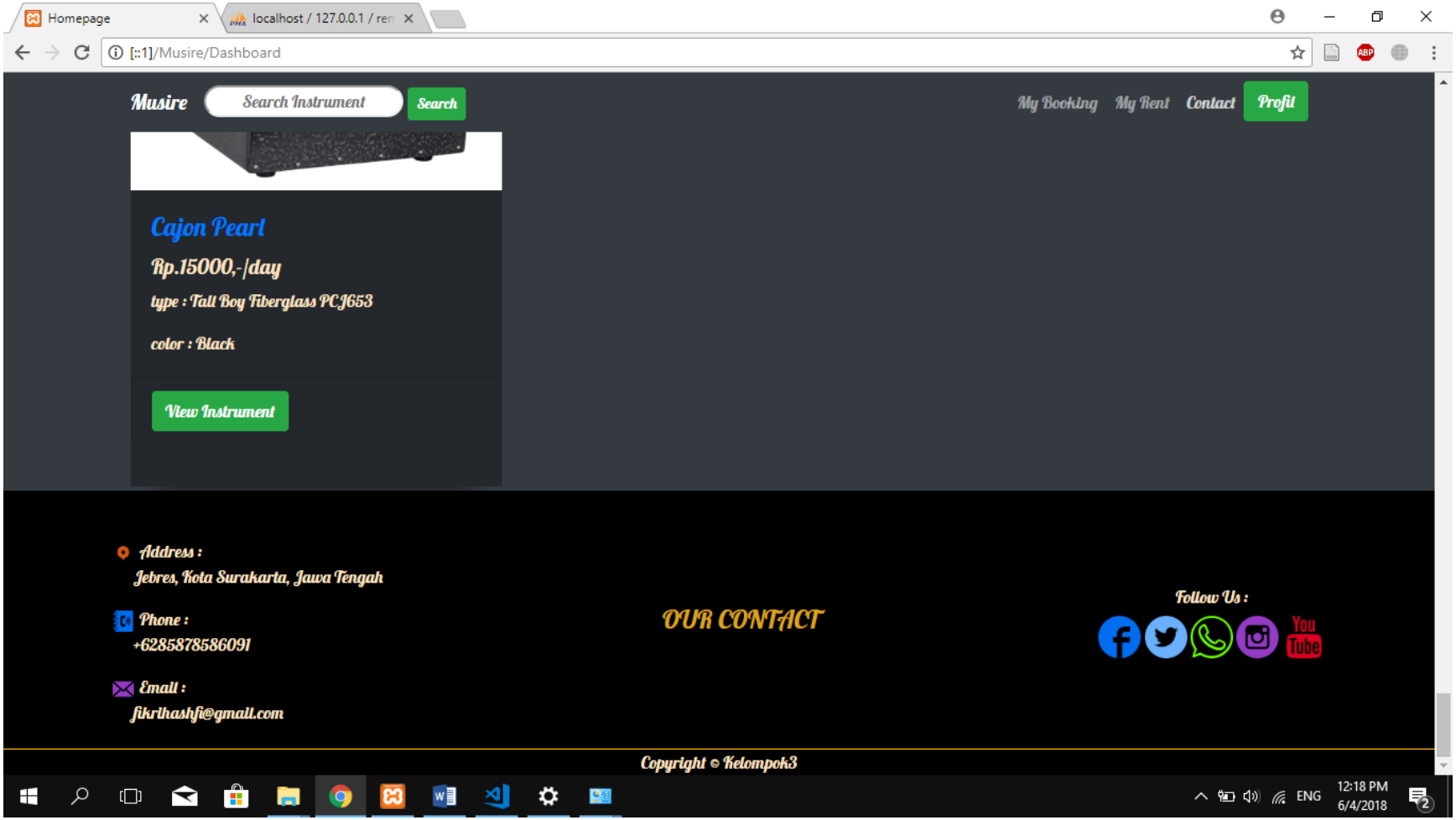
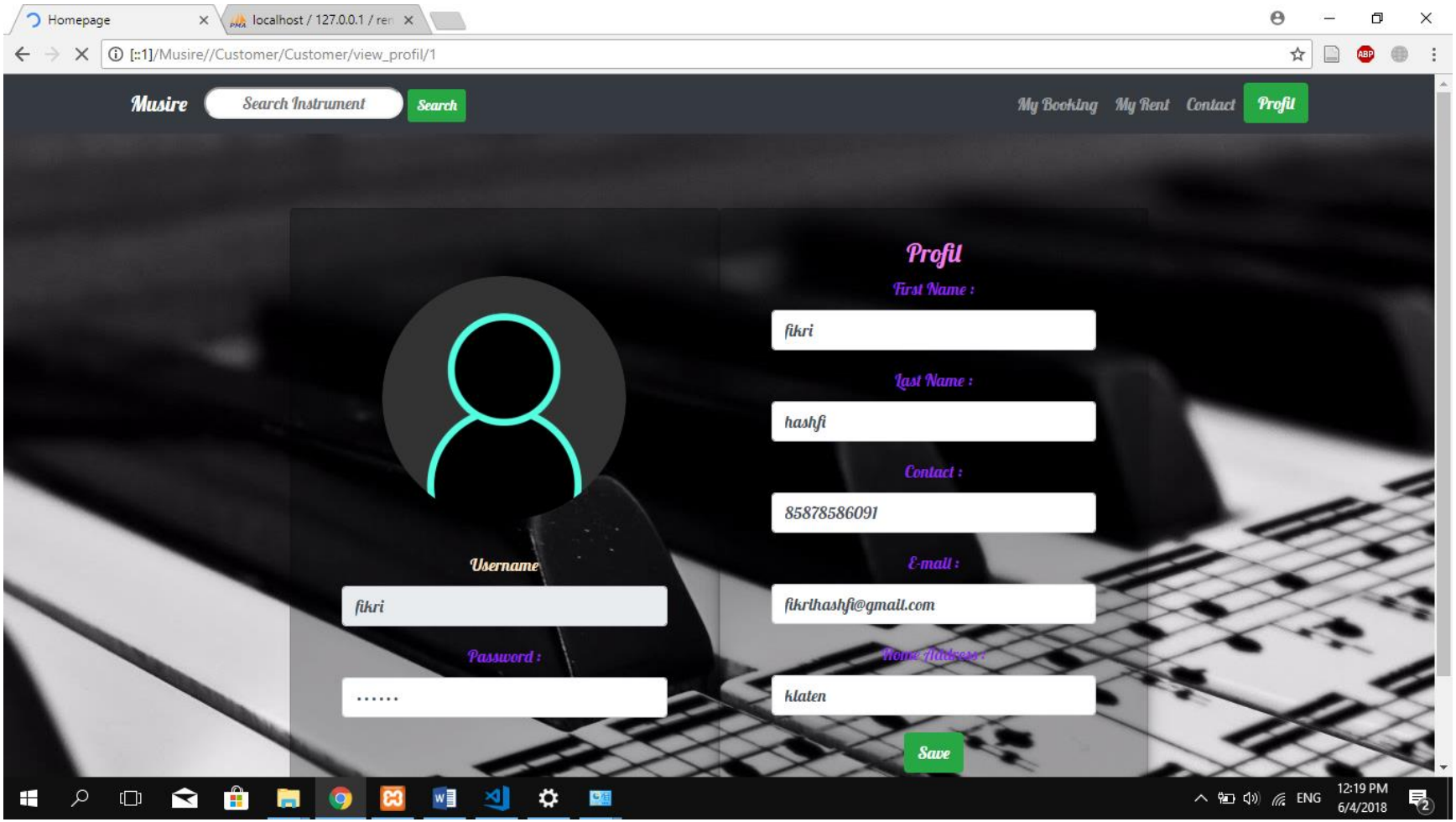
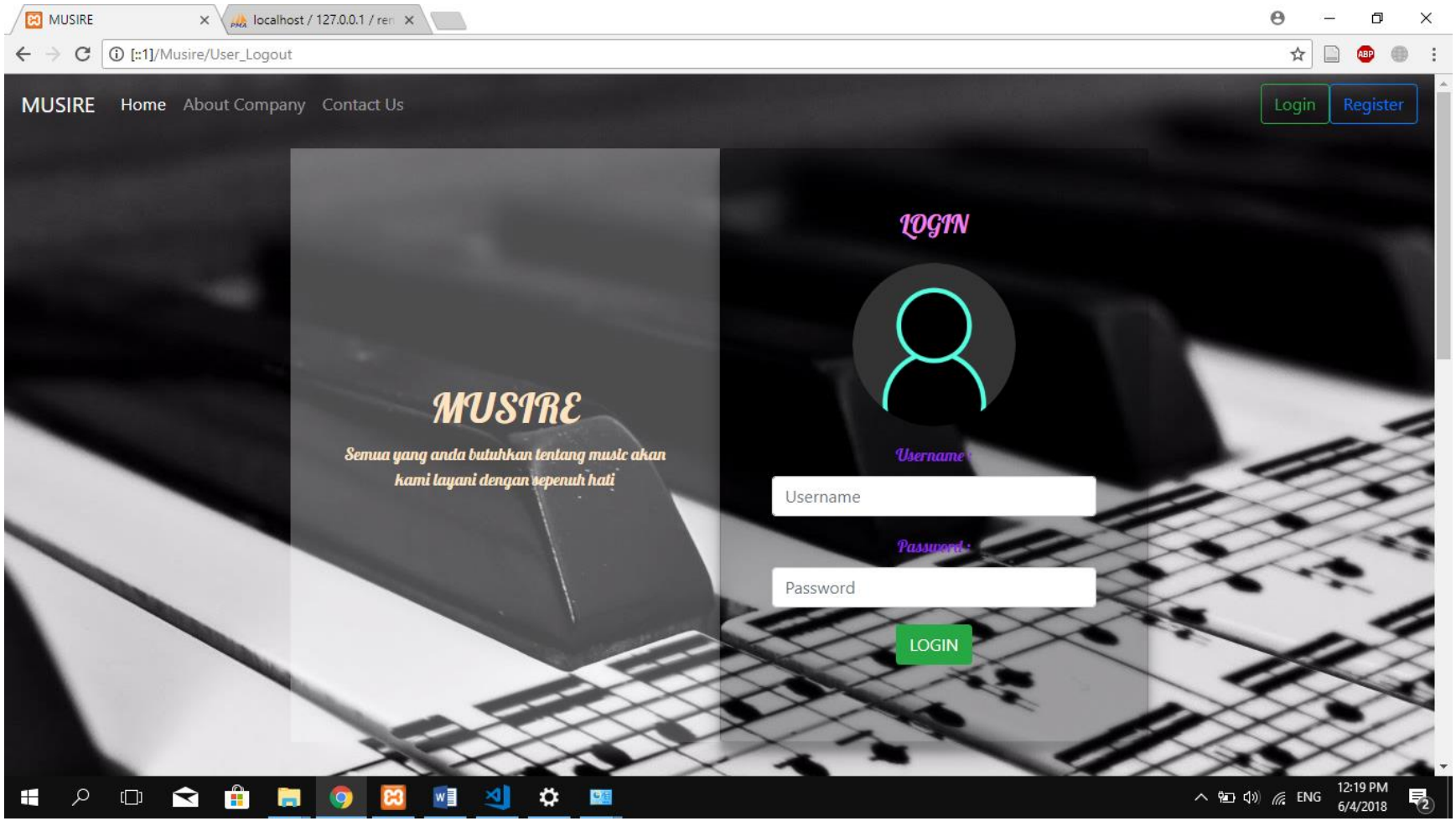
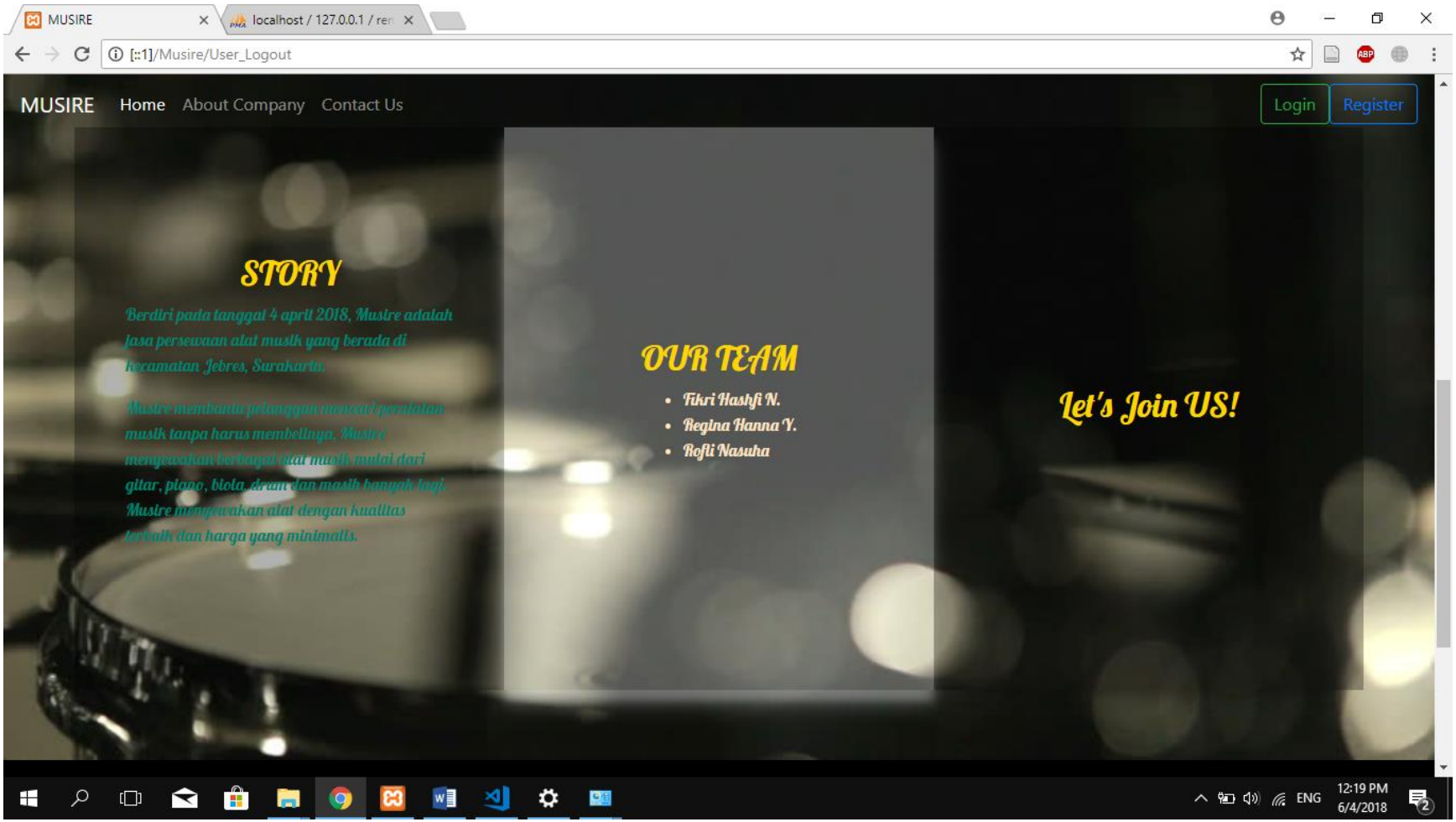
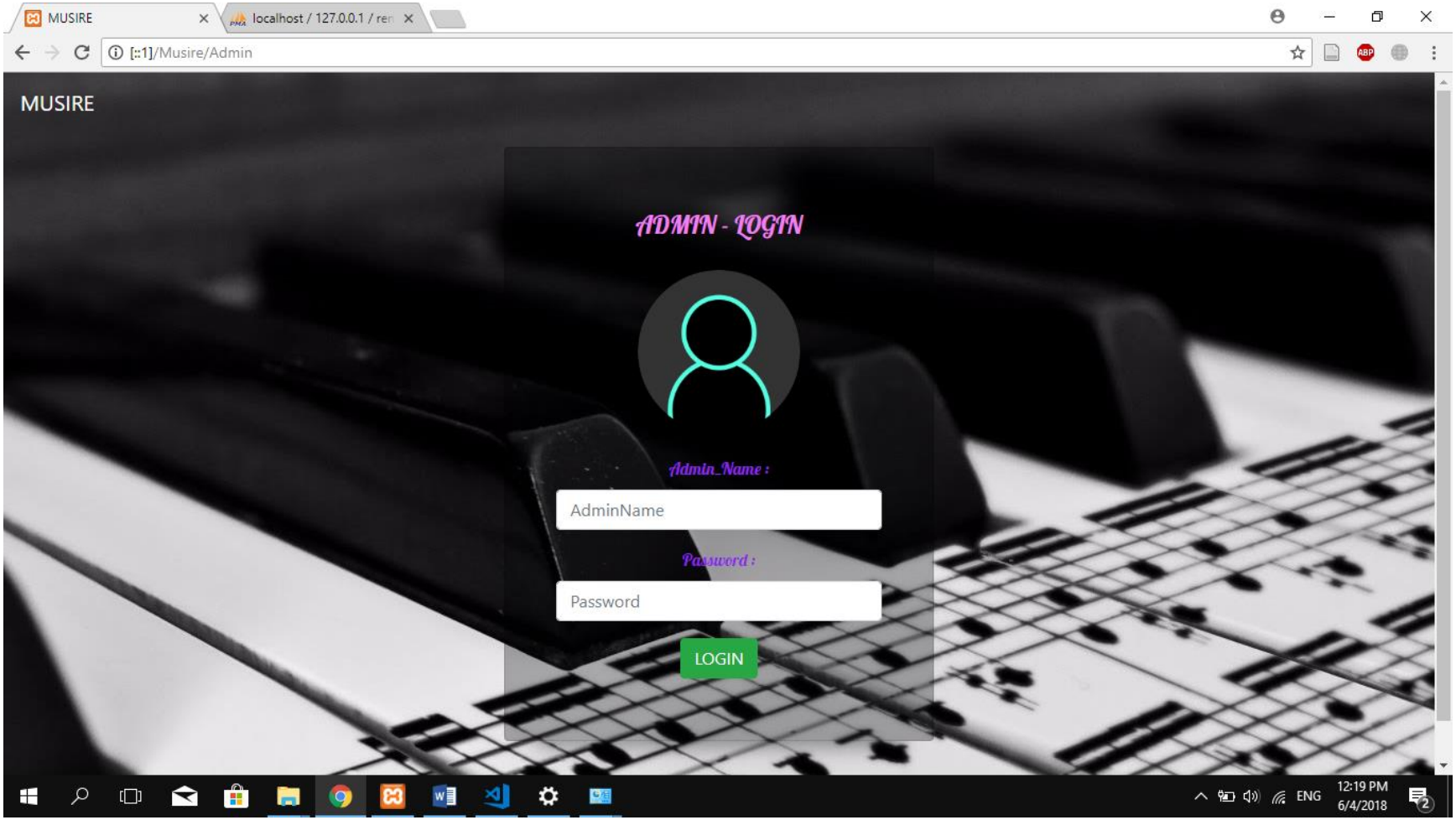

Homepage
localhost / 127.0.0.1 / ren
[::1]/Musire/Dashboard
Musire
Search Instrument
Search
My Booking
My Rent
Contact
Profil
Cajon Pearl
Rp.15000,-/day
type : Tall Boy Fiberglass PCJ653
color : Black
View Instrument
Address :
Jebres, Kota Surakarta, Jawa Tengah
Phone :
+6285878586091
Email :
fikrihashfi@gmail.com
OUR CONTACT
Follow Us :
Copyright © Kelompok3
ENG
12:18 PM
6/4/2018

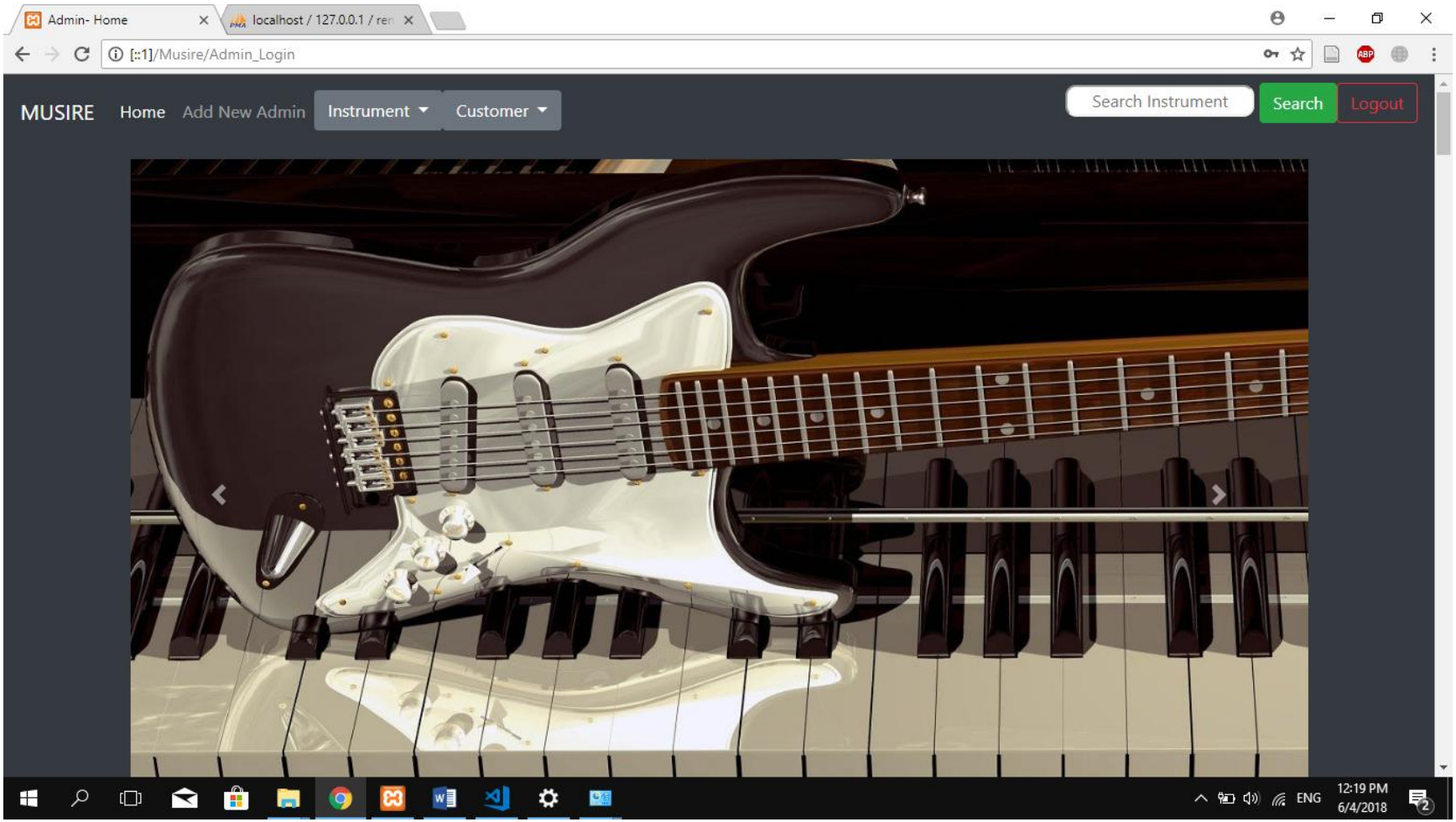

Homepage
localhost / 127.0.0.1 / re
[::1]/Musire//Customer/Customer/view_profil/1
Musire
Search Instrument
Search
My Booking
My Rent
Contact
Profil
Profil
First Name :
fikri
Last Name :
hashfi
Contact :
85878586091
E-mail :
fikrihashfi@gmail.com
Home Address :
klaten
Save
Username
fikri
Password :
.....
ENG
12:19 PM
6/4/2018

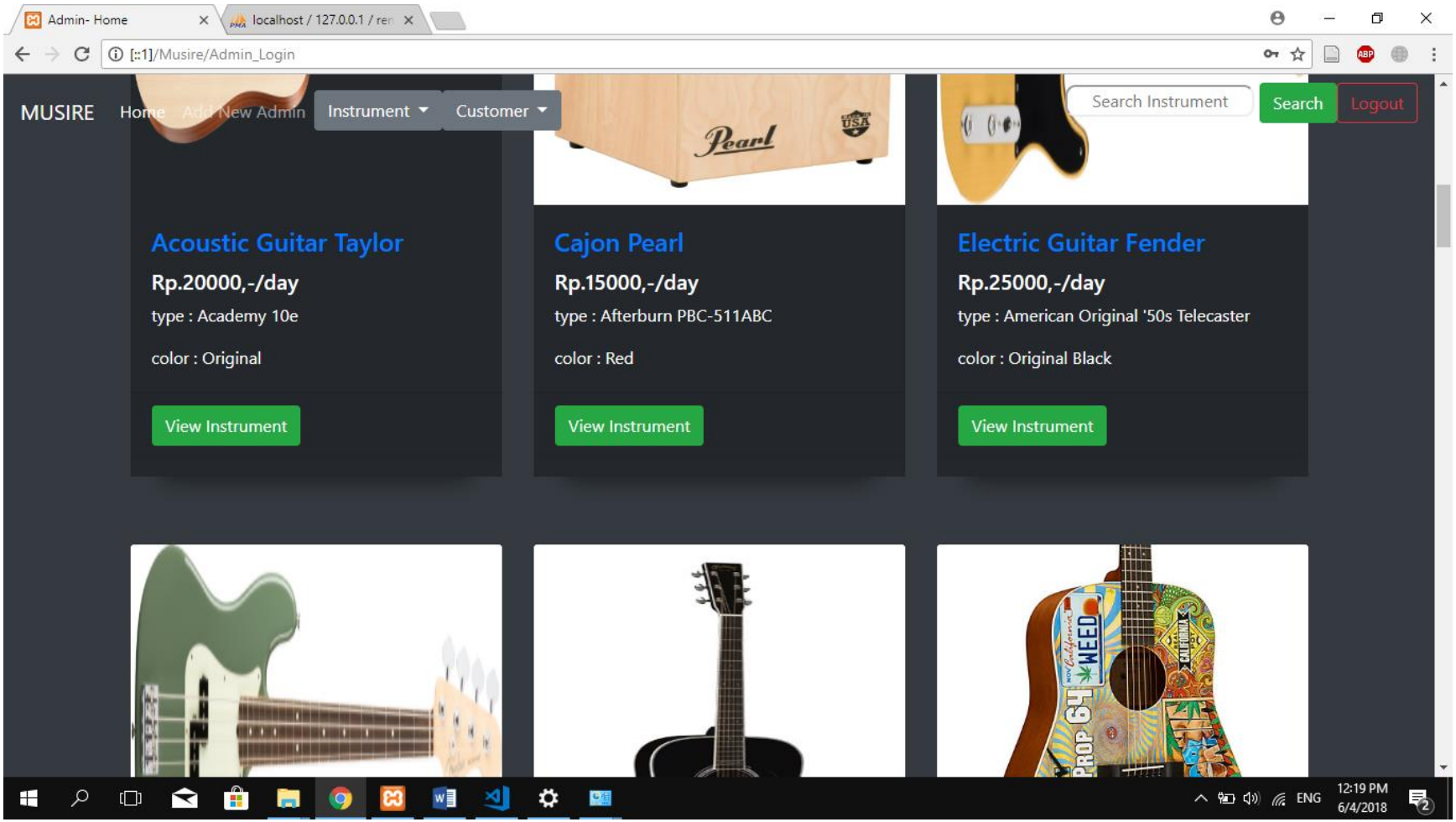

MUSIRE
localhost / 127.0.0.1 / ren
[::1]/Musire/User_Logout
MUSIRE
Home
About Company
Contact Us
Login
Register
MUSIRE
Semua yang anda butuhkan tentang music akan kami layani dengan sepenuh hati
LOGIN
Username :
Username
Password :
Password
LOGIN
ENG
12:19 PM
6/4/2018

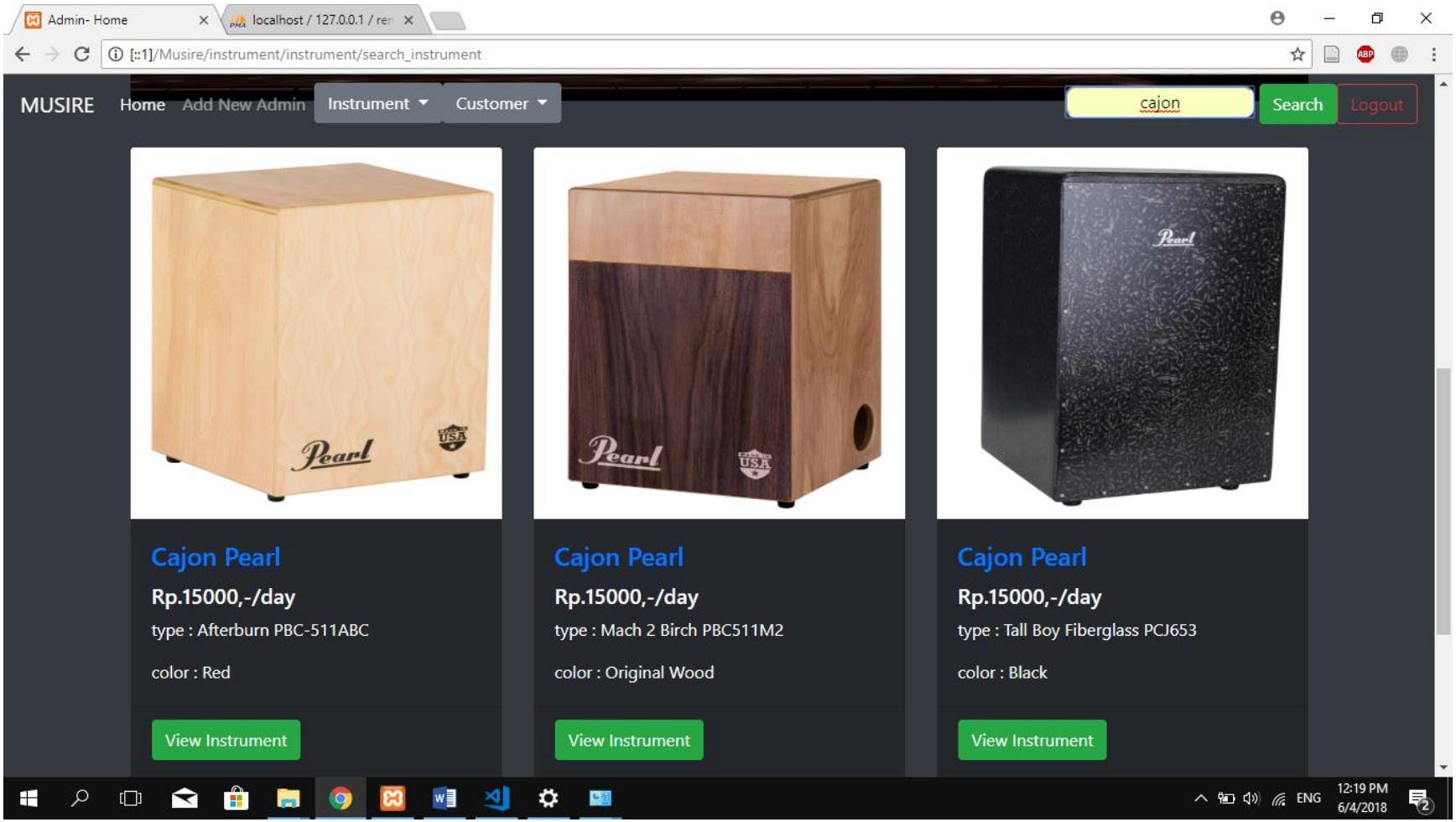

MUSIRE
localhost / 127.0.0.1 / ren
[::1]/Musire/User_Logout
MUSIRE
Home
About Company
Contact Us
Login
Register
STORY
Berdiri pada tanggal 4 april 2018, Musire adalah jasa persewaan alat musik yang berada di kecamatan Jebres, Surakarta.
Musire membantu pelanggan mencari peralatan musik tanpa harus membelinya. Musire menyewakan berbagai alat musik mulai dari gitar, piano, biola, drum dan masih banyak lagi. Musire menyewakan alat dengan kualitas terbaik dan harga yang minimalis.
OUR TEAM
Fikri Hashfi N.
Regina Hanna Y.
Rofli Nasuha
Let's Join US!
ENG
12:19 PM
6/4/2018

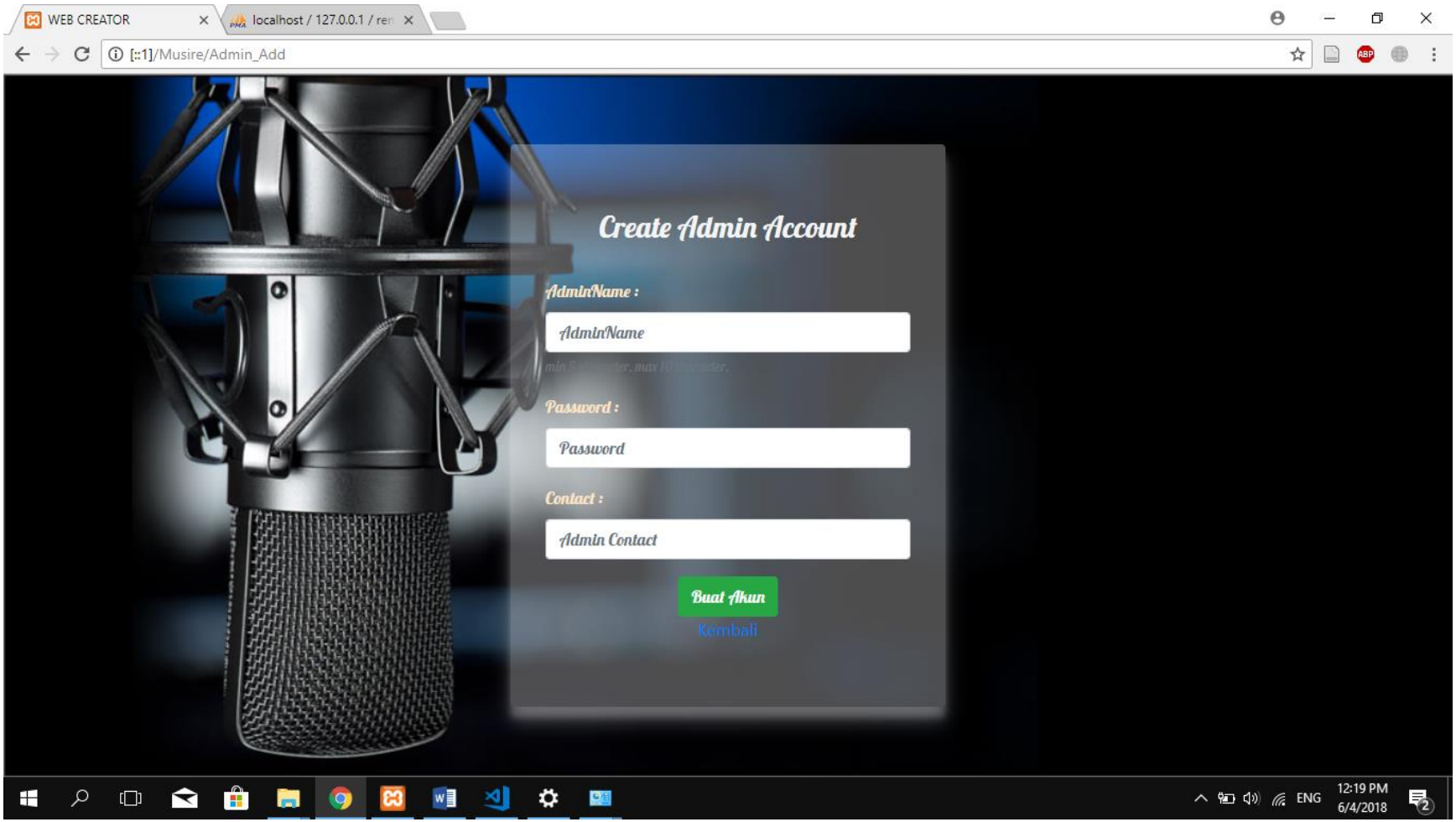
Lampiran Admin

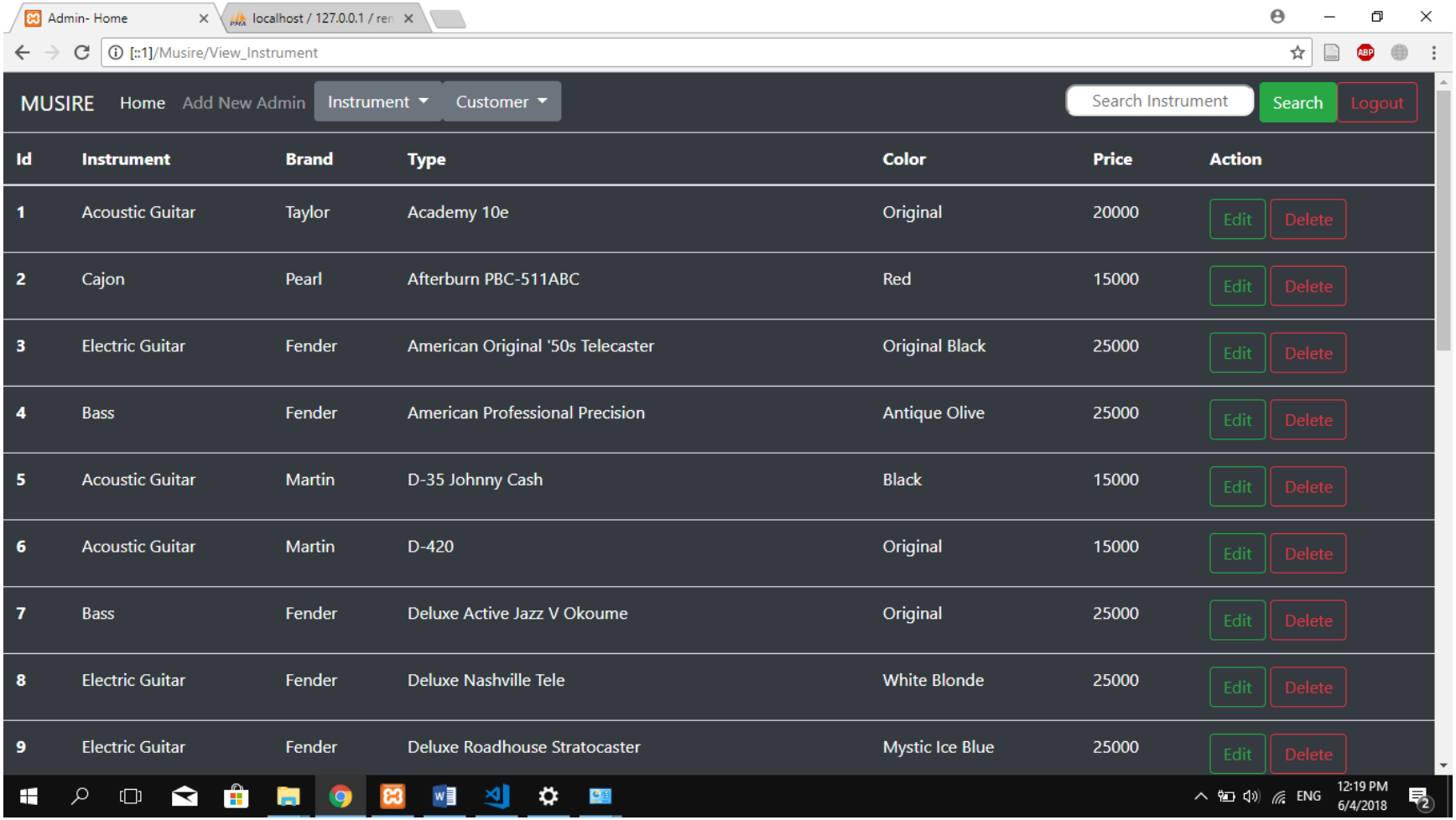


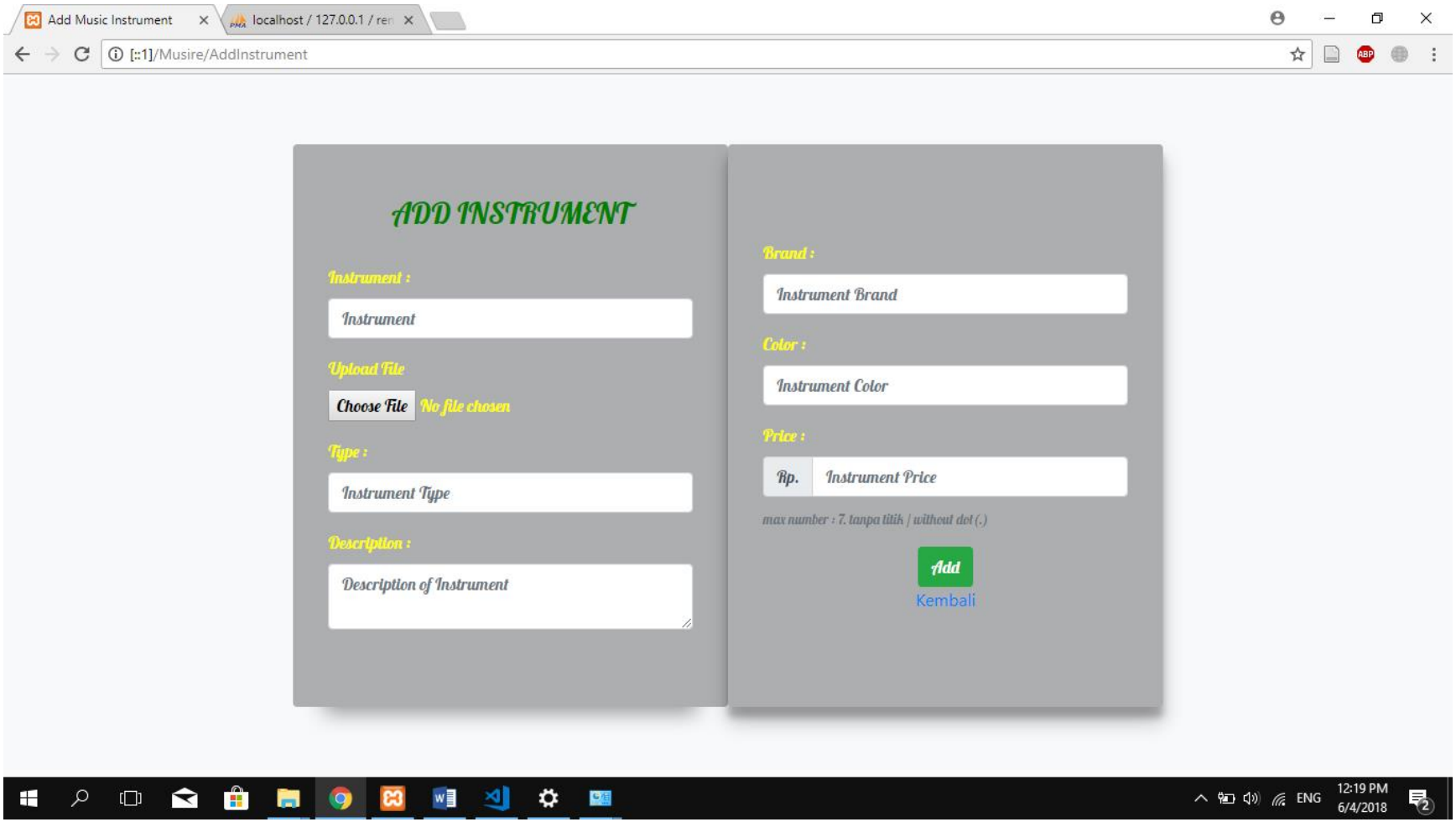

Admin- Home
localhost / 127.0.0.1 / ren
[::1]/Musire/Admin_Login
MUSIRE
Home
Add New Admin
Instrument
Customer
Search Instrument
Search
Logout
ENG
12:19 PM
6/4/2018

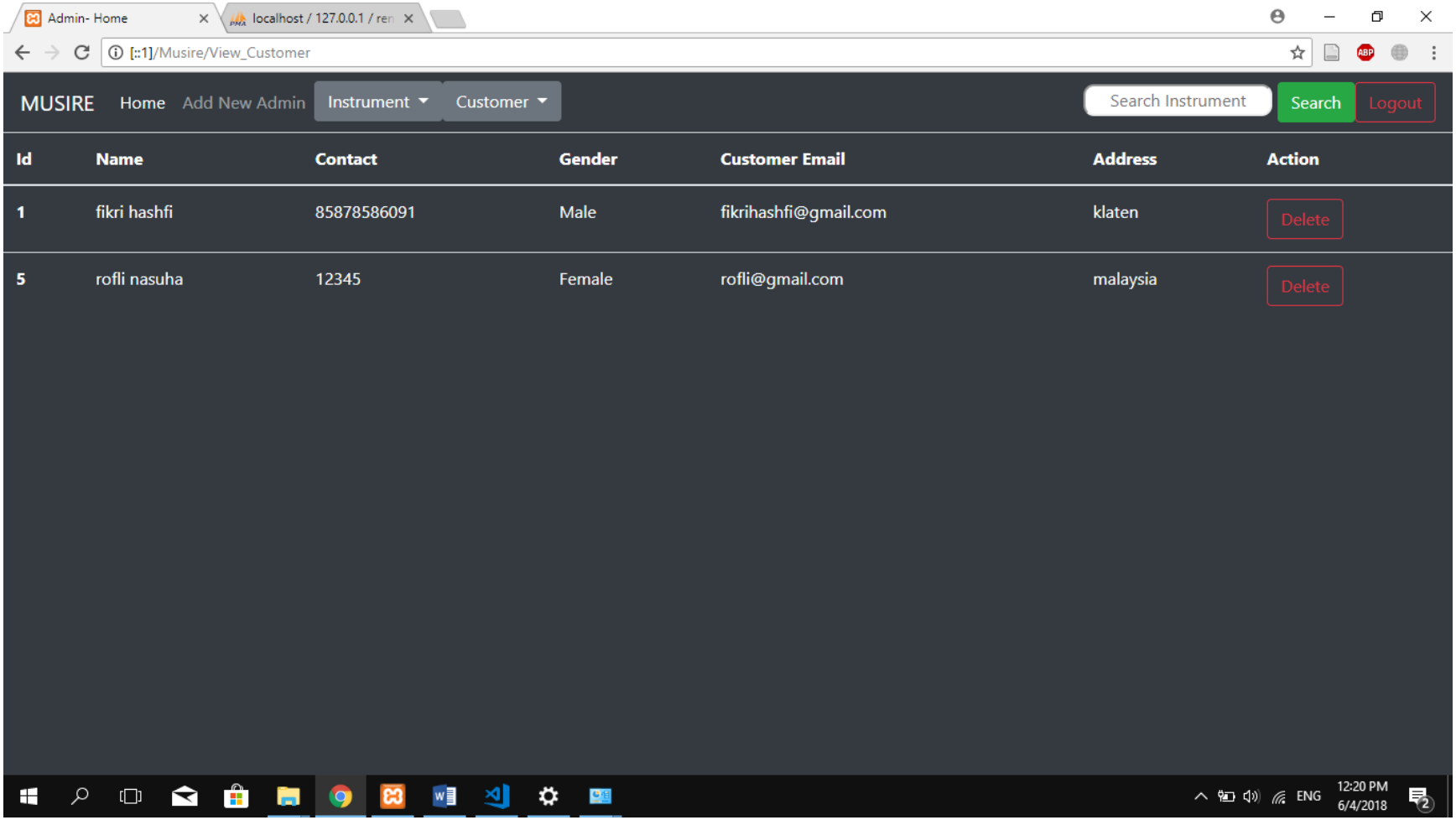

Admin- Home
localhost / 127.0.0.1 / re
[::1]/Musire/Admin_Login
MUSIRE
Home
Add New Admin
Instrument
Customer
Search Instrument
Search
Logout
Acoustic Guitar Taylor
Rp.20000,-/day
type : Academy 10e
color : Original
View Instrument
Cajon Pearl
Rp.15000,-/day
type : Afterburn PBC-511ABC
color : Red
View Instrument
Electric Guitar Fender
Rp.25000,-/day
type : American Original '50s Telecaster
color : Original Black
View Instrument
ENG
12:19 PM
6/4/2018

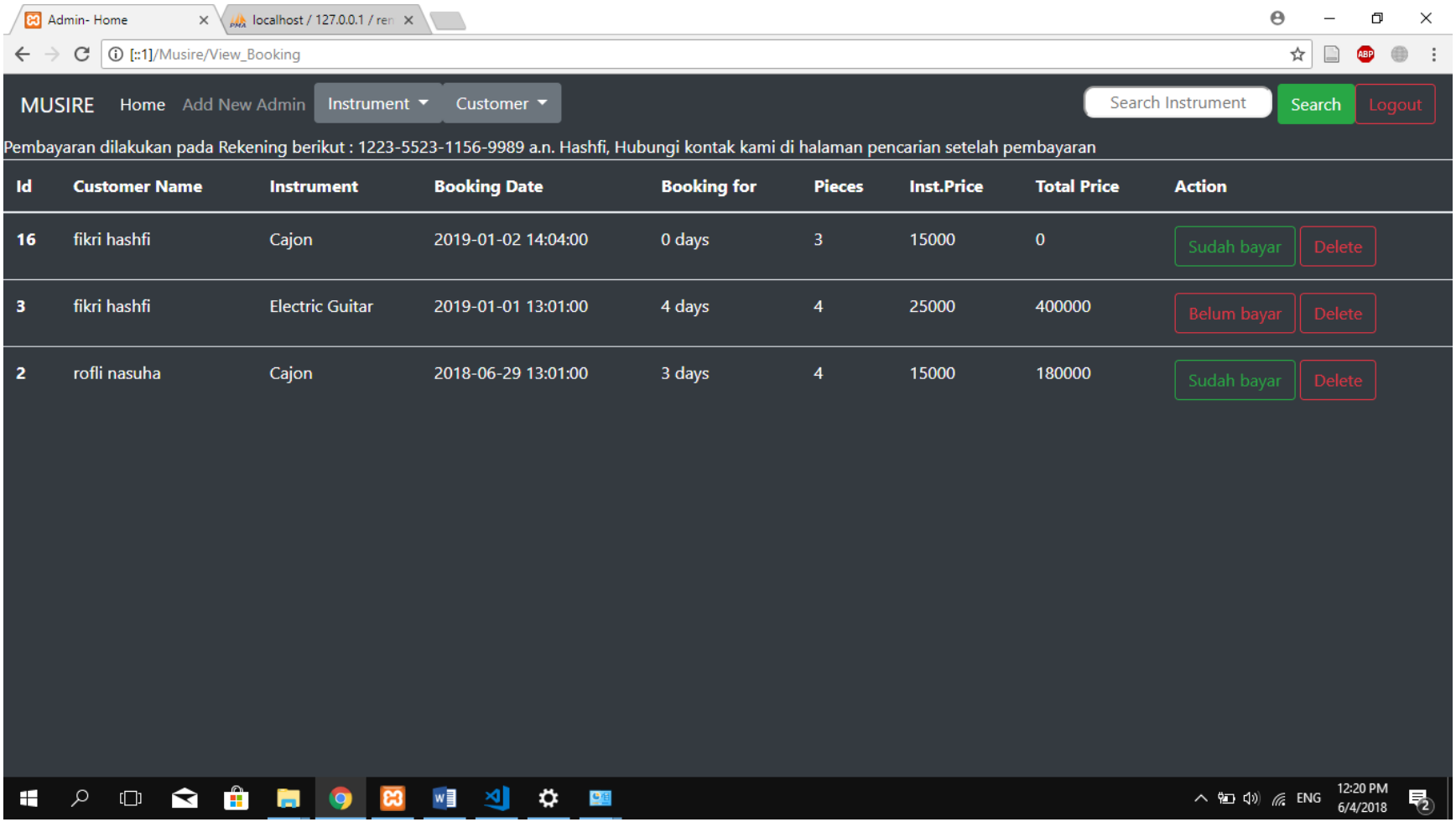

Admin- Home
localhost / 127.0.0.1 / ren
[::1]/Musire/instrument/instrument/search_instrument
MUSIRE
Home
Add New Admin
Instrument
Customer
cajon
Search
Logout
Cajon Pearl
Rp.15000,-/day
type : Afterburn PBC-511ABC
color : Red
View Instrument
Cajon Pearl
Rp.15000,-/day
type : Mach 2 Birch PBC511M2
color : Original Wood
View Instrument
Cajon Pearl
Rp.15000,-/day
type : Tall Boy Fiberglass PCJ653
color : Black
View Instrument
ENG
12:19 PM
6/4/2018

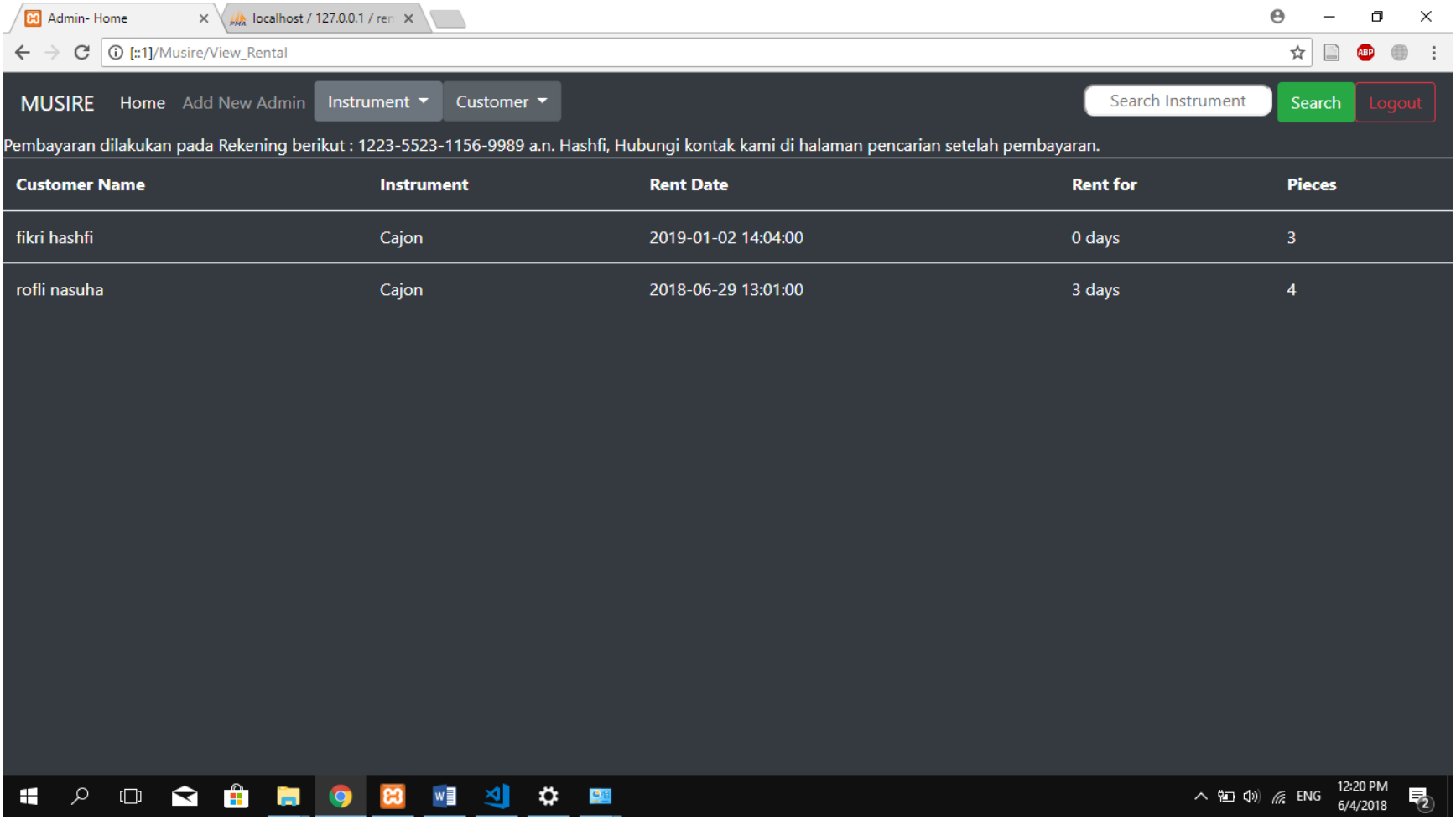

WEB CREATOR
localhost / 127.0.0.1 / ren
[::1]/Musire/Admin_Add
Create Admin Account
AdminName :
AdminName
Password :
Password
Contact :
Admin Contact
Buat Akun
Kembali
ENG
12:19 PM
6/4/2018


Admin- Home
localhost / 127.0.0.1 / ren
[::1]/Musire/View_Instrument
MUSIRE
Home
Add New Admin
Instrument
Customer
Search Instrument
Search
Logout
Id
Instrument
Brand
Type
Color
Price
Action
1 Acoustic Guitar Taylor Academy 10e Original 20000 Edit Delete
2 Cajon Pearl Afterburn PBC-511ABC Red 15000 Edit Delete
3 Electric Guitar Fender American Original '50s Telecaster Original Black 25000 Edit Delete
4 Bass Fender American Professional Precision Antique Olive 25000 Edit Delete
5 Acoustic Guitar Martin D-35 Johnny Cash Black 15000 Edit Delete
6 Acoustic Guitar Martin D-420 Original 15000 Edit Delete
7 Bass Fender Deluxe Active Jazz V Okoume Original 25000 Edit Delete
8 Electric Guitar Fender Deluxe Nashville Tele White Blonde 25000 Edit Delete
9 Electric Guitar Fender Deluxe Roadhouse Stratocaster Mystic Ice Blue 25000 Edit Delete
ENG
12:19 PM
6/4/2018


Add Music Instrument
localhost / 127.0.0.1 / re
[::1]/Musire/AddInstrument
ADD INSTRUMENT
Instrument :
Instrument
Upload File
Choose File
No file chosen
Type :
Instrument Type
Description :
Description of Instrument
Brand :
Instrument Brand
Color :
Instrument Color
Price :
Rp.
Instrument Price
max number : 7. tanpa titik / without dot (.)
Add
Kembali
ENG
12:19 PM
6/4/2018


Admin- Home
localhost / 127.0.0.1 / ren
[::1]/Musire/View_Customer
MUSIRE
Home
Add New Admin
Instrument
Customer
Search Instrument
Search
Logout
Id
Name
Contact
Gender
Customer Email
Address
Action
1
fikri hashfi
85878586091
Male
fikrihashfi@gmail.com
klaten
Delete
5
rofli nasuha
12345
Female
rofli@gmail.com
malaysia
Delete
ENG
12:20 PM
6/4/2018


Admin- Home
localhost / 127.0.0.1 / ren
[::1]/Musire/View_Booking
MUSIRE
Home
Add New Admin
Instrument
Customer
Search Instrument
Search
Logout
Pembayaran dilakukan pada Rekening berikut : 1223-5523-1156-9989 a.n. Hashfi, Hubungi kontak kami di halaman pencarian setelah pembayaran
Id
Customer Name
Instrument
Booking Date
Booking for
Pieces
Inst.Price
Total Price
Action
16
fikri hashfi
Cajon
2019-01-02 14:04:00
0 days
3
15000
0
Sudah bayar
Delete
3
fikri hashfi
Electric Guitar
2019-01-01 13:01:00
4 days
4
25000
400000
Belum bayar
Delete
2
rofli nasuha
Cajon
2018-06-29 13:01:00
3 days
4
15000
180000
Sudah bayar
Delete
ENG
12:20 PM
6/4/2018


Admin- Home
localhost / 127.0.0.1 / ren
[::1]/Musire/View_Rental
MUSIRE
Home
Add New Admin
Instrument
Customer
Search Instrument
Search
Logout
Pembayaran dilakukan pada Rekening berikut : 1223-5523-1156-9989 a.n. Hashfi, Hubungi kontak kami di halaman pencarian setelah pembayaran.
Customer Name
Instrument
Rent Date
Rent for
Pieces
fikri hashfi
Cajon
2019-01-02 14:04:00
0 days
3
rofli nasuha
Cajon
2018-06-29 13:01:00
3 days
4
ENG
12:20 PM
6/4/2018