**LAPORAN TUGAS**

**Pemrograman Berbasis Java**

**Database Wilayah Indonesia Berdasarkan Master File Desa Badan Pusat Statistik (MFD BPS) Indonesia**



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# **BAB I PENDAHULUAN**

* 1. **Latar Belakang**

Dokumen ini merupakan diskripsi dari aplikasi Database Wilayah Indonesia Berdasarkan Master File Desa Badan Pusat Statistik (MFD BPS) Indonesia yang dikembangkan menggunakan bahasa pemograman berbasis java. Dokumen ini dibuat untuk memenuhi tugas mata kuliah Pemograman Berbasis Java.

* 1. **Alasan Pemilihan Masalah**

Master File Desa Badan Pusat Statistik (MFD BPS) Indonesia merupakan acuan dasar yang digunakan oleh pengembang aplikasi baik website, mobile maupun desktop jika ingin mengembangkan sebuah aplikasi yang memiliki basis data daerah Indonesia.

Aplikasi ini dikembangkan untuk mempermudah siapapun baik personal maupun organisasi untuk mengelola database wilayah Indonesia menggunakan konsep MFD online untuk selanjutnya dapat dikembangkan kembali.

# **BAB II DATABASE**

1. **Rancangan Tabel**
2. Tabel

|  |  |
| --- | --- |
| **Tebel** | **Colom** |
| ommu\_core\_zone\_province | `province\_id` smallint(5), `publish` tinyint(1), `province` varchar(64), `mfdonline` char(2), `creation\_date`, `modified\_date` |
| ommu\_core\_zone\_city | `city\_id` int(11), `publish` tinyint(1), `province\_id` smallint(5), `city` varchar(64) , `mfdonline` char(4), `creation\_date`, `modified\_date` |
| ommu\_core\_zone\_districts | `district\_id` int(11), `publish` tinyint(1), `city\_id` int(11), `district\_name` varchar(64), `mfdonline` char(7), `creation\_date`, `modified\_date` |
| ommu\_core\_zone\_village | `village\_id`, `publish`, `district\_id`, `village\_name`, `zipcode`, `mfdonline`, `creation\_date`, `modified\_date` |

1. Trigger

|  |  |
| --- | --- |
| **Name** | **Deskripsi** |
| coreBeforeInsertCity | DECLARE province\_id\_tr SMALLINT;    /\*CALL getOmmuZoneProvinceIdWithCityMfdonline(NEW.mfdonline, province\_id\_tr);\*/  SELECT `province\_id` INTO province\_id\_tr FROM `ommu\_core\_zone\_province` WHERE `mfdonline`=LEFT(NEW.mfdonline,2);  IF (province\_id\_tr IS NOT NULL) THEN  SET NEW.province\_id = province\_id\_tr;  END IF;    SET NEW.city = TRIM(NEW.city); |
| coreBeforeUpdateCity | DECLARE province\_id\_tr SMALLINT;    IF (NEW.mfdonline <> OLD.mfdonline) THEN  /\*CALL getOmmuZoneProvinceIdWithCityMfdonline(NEW.mfdonline, province\_id\_tr);\*/  SELECT `province\_id` INTO province\_id\_tr FROM `ommu\_core\_zone\_province` WHERE `mfdonline`=LEFT(NEW.mfdonline,2);  IF (province\_id\_tr IS NOT NULL) THEN  SET NEW.province\_id = province\_id\_tr;  END IF;  END IF;  SET NEW.city = TRIM(NEW.city);  SET NEW.modified\_date = NOW(); |
| coreBeforeInsertDistricts | DECLARE `city\_id\_tr` INT;    /\*CALL getOmmuZoneCityIdWithDistrictMfdonline(NEW.mfdonline, city\_id\_tr);\*/  SELECT `city\_id` INTO city\_id\_tr FROM `ommu\_core\_zone\_city` WHERE `mfdonline`=LEFT(NEW.mfdonline,4);  IF (city\_id\_tr IS NOT NULL) THEN  SET NEW.city\_id = city\_id\_tr;  END IF;    SET NEW.district\_name = TRIM(NEW.district\_name); |
| coreBeforeUpdateDistricts | DECLARE `city\_id\_tr` INT;    IF (NEW.mfdonline <> OLD.mfdonline) THEN  /\*CALL getOmmuZoneCityIdWithDistrictMfdonline(NEW.mfdonline, city\_id\_tr);\*/  SELECT `city\_id` INTO city\_id\_tr FROM `ommu\_core\_zone\_city` WHERE `mfdonline`=LEFT(NEW.mfdonline,4);  IF (city\_id\_tr IS NOT NULL) THEN  SET NEW.city\_id = city\_id\_tr;  END IF;  END IF;  SET NEW.district\_name = TRIM(NEW.district\_name);  SET NEW.modified\_date = NOW(); |
| coreBeforeInsertProvince | SET NEW.province = TRIM(NEW.province); |
| coreBeforeUpdateProvince | SET NEW.province = TRIM(NEW.province);  SET NEW.modified\_date = NOW(); |
| coreBeforeInsertVillage | DECLARE `district\_id\_tr` INT;    /\*CALL getOmmuZoneCityIdWithDistrictMfdonline(NEW.mfdonline, city\_id\_tr);\*/  SELECT `district\_id` INTO district\_id\_tr FROM `ommu\_core\_zone\_districts` WHERE `mfdonline`=LEFT(NEW.mfdonline,7);  IF (district\_id\_tr IS NOT NULL) THEN  SET NEW.district\_id = district\_id\_tr;  END IF;    SET NEW.village\_name = TRIM(NEW.village\_name);  SET NEW.zipcode = TRIM(NEW.zipcode); |
| coreBeforeUpdateVillage | DECLARE `district\_id\_tr` INT;    IF (NEW.mfdonline <> OLD.mfdonline) THEN  /\*CALL getOmmuZoneCityIdWithDistrictMfdonline(NEW.mfdonline, city\_id\_tr);\*/  SELECT `district\_id` INTO district\_id\_tr FROM `ommu\_core\_zone\_districts` WHERE `mfdonline`=LEFT(NEW.mfdonline,7);  IF (district\_id\_tr IS NOT NULL) THEN  SET NEW.district\_id = district\_id\_tr;  END IF;  END IF;  SET NEW.village\_name = TRIM(NEW.village\_name);  SET NEW.zipcode = TRIM(NEW.zipcode);  SET NEW.modified\_date = NOW(); |

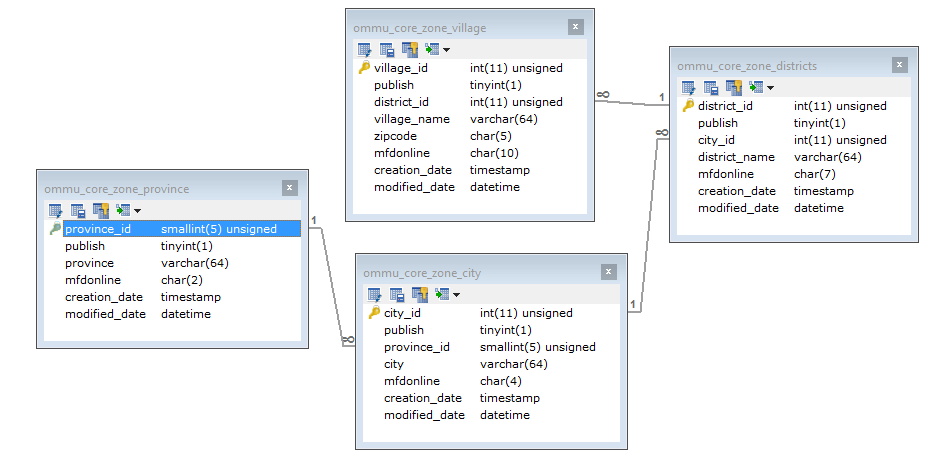
1. Store Prosedure

|  |
| --- |
| **Prosedure** |
| /\*!50003 CREATE DEFINER=`root`@`localhost` PROCEDURE `getOmmuZoneCityIdWithDistrictMfdonline`(IN `mfdonline\_sp` CHAR, OUT `city\_id\_sp` INT)  BEGIN  SELECT `city\_id` INTO city\_id\_sp FROM `ommu\_core\_zone\_city` WHERE `mfdonline`=LEFT(mfdonline\_sp,4);  END \*/$$  DELIMITER ; |
| /\*!50003 CREATE DEFINER=`root`@`localhost` PROCEDURE `getOmmuZoneCountryId`(IN `province\_id\_sp` SMALLINT, OUT `country\_id\_sp` SMALLINT)  BEGIN  SELECT `country\_id` INTO country\_id\_sp FROM `ommu\_core\_zone\_province` WHERE `province\_id`=province\_id\_sp;  END \*/$$  DELIMITER ; |
| /\*!50003 CREATE DEFINER=`root`@`localhost` PROCEDURE `getOmmuZoneProvinceId`(in `city\_id\_sp` INT, OUT `province\_id\_sp` SMALLINT)  BEGIN  SELECT `province\_id` INTO province\_id\_sp FROM `ommu\_core\_zone\_city` WHERE `city\_id`=city\_id\_sp;  END \*/$$  DELIMITER ; |
| /\*!50003 CREATE DEFINER=`root`@`localhost` PROCEDURE `getOmmuZoneProvinceIdWithCityMfdonline`(IN `mfdonline\_sp` CHAR, OUT `province\_id\_sp` SMALLINT)  BEGIN  SELECT `province\_id` INTO province\_id\_sp FROM `ommu\_core\_zone\_province` WHERE `mfdonline`=LEFT(mfdonline\_sp,2);  /\*  CALL getOmmuZoneProvinceIdWithCityMfdonline(NEW.mfdonline, province\_id\_tr);  SELECT `province\_id` INTO province\_id\_tr FROM `ommu\_core\_zone\_province` WHERE `mfdonline`=LEFT(NEW.mfdonline,2);\*/  END \*/$$  DELIMITER ; |

1. View

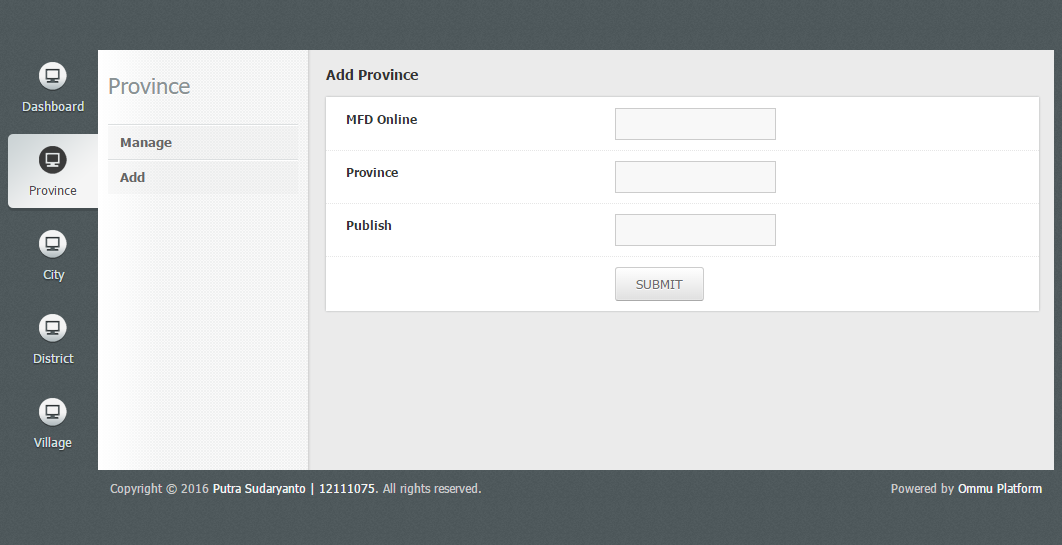
|  |  |
| --- | --- |
| **Name and View** | **Deskripsi** |
| `\_view\_core\_zone\_city`(  `city\_id` int(11) unsigned ,  `city` varchar(64) ,  `province` varchar(64)  ) | select `a`.`city\_id` AS `city\_id`, `a`.`city` AS `city`, `b`.`province` AS `province` from (`ommu\_core\_zone\_city` `a` left join `ommu\_core\_zone\_province` `b` on((`a`.`province\_id` = `b`.`province\_id`))) |
| `\_view\_core\_zone\_districts`(  `district\_id` int(11) unsigned ,  `district\_name` varchar(64) ,  `city` varchar(64) ,  `province` varchar(64)  ) | select `a`.`district\_id` AS `district\_id`, `a`.`district\_name` AS `district\_name`, `b`.`city` AS `city`, `b`.`province` AS `province` from (`ommu\_core\_zone\_districts` `a` left join `\_view\_core\_zone\_city` `b` on((`a`.`city\_id` = `b`.`city\_id`))) |
| `\_view\_core\_zone\_village`(  `village\_id` int(11) unsigned ,  `village\_name` varchar(64) ,  `district\_name` varchar(64) ,  `city` varchar(64) ,  `province` varchar(64)  ) | select `a`.`village\_id` AS `village\_id`, `a`.`village\_name` AS `village\_name`, `b`.`district\_name` AS `district\_name`, `b`.`city` AS `city`, `b`.`province` AS `province` from (`ommu\_core\_zone\_village` `a` left join `\_view\_core\_zone\_districts` `b` on((`a`.`district\_id` = `b`.`district\_id`))) |

1. **Relasi Database**

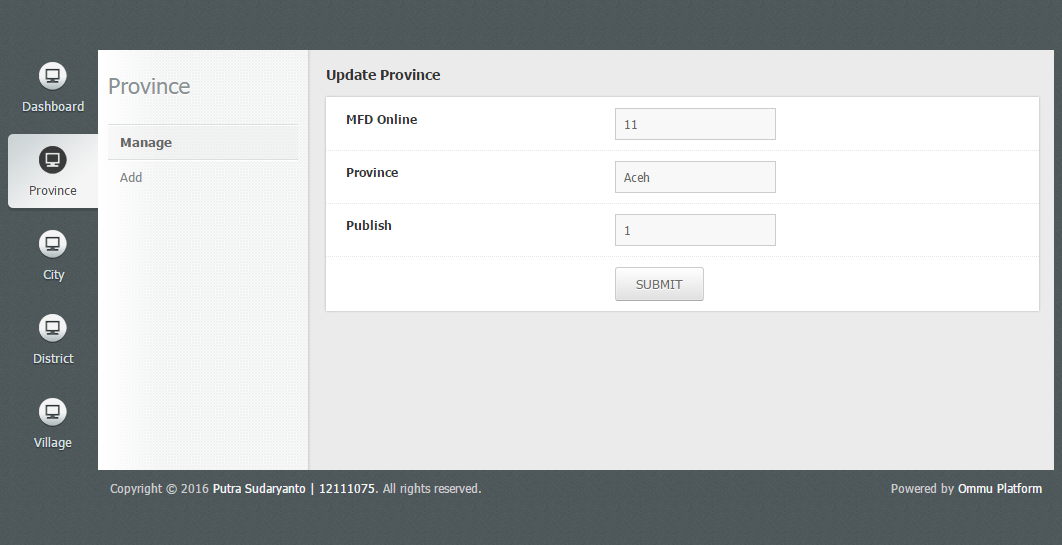


# **BAB III USER INTERFACE**

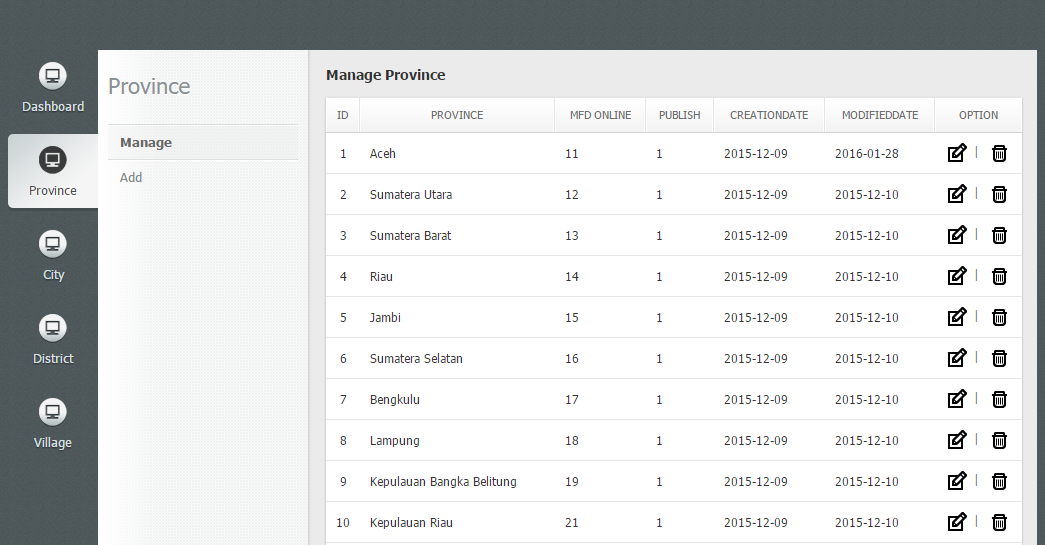
1. **Welcome**
2. **Provinsi**
3. Insert



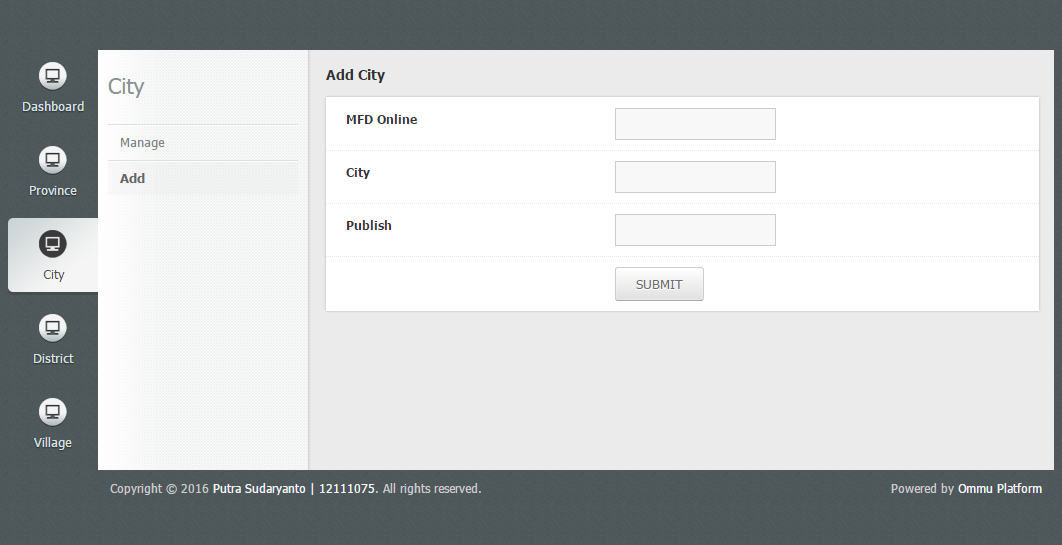
1. Update



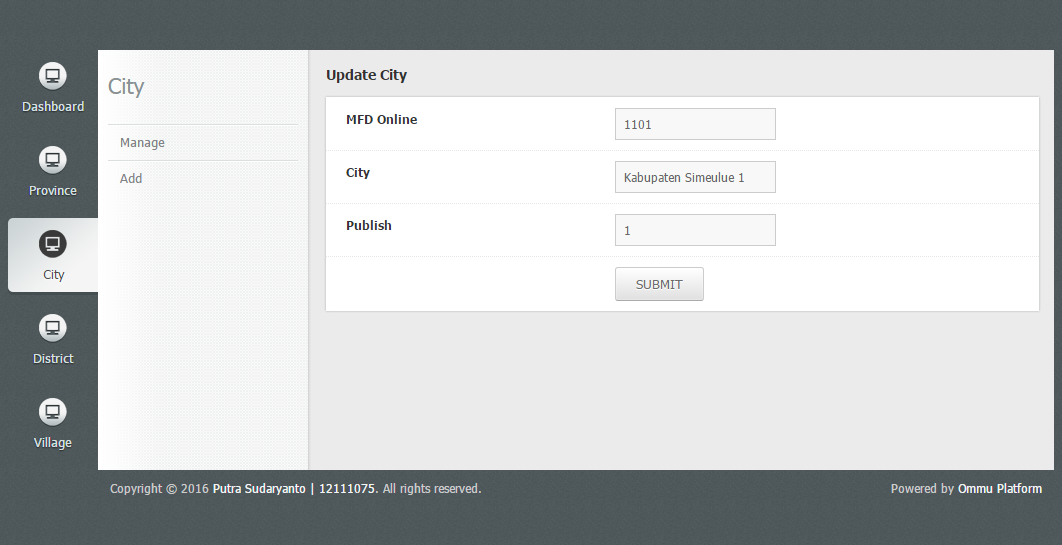
1. View



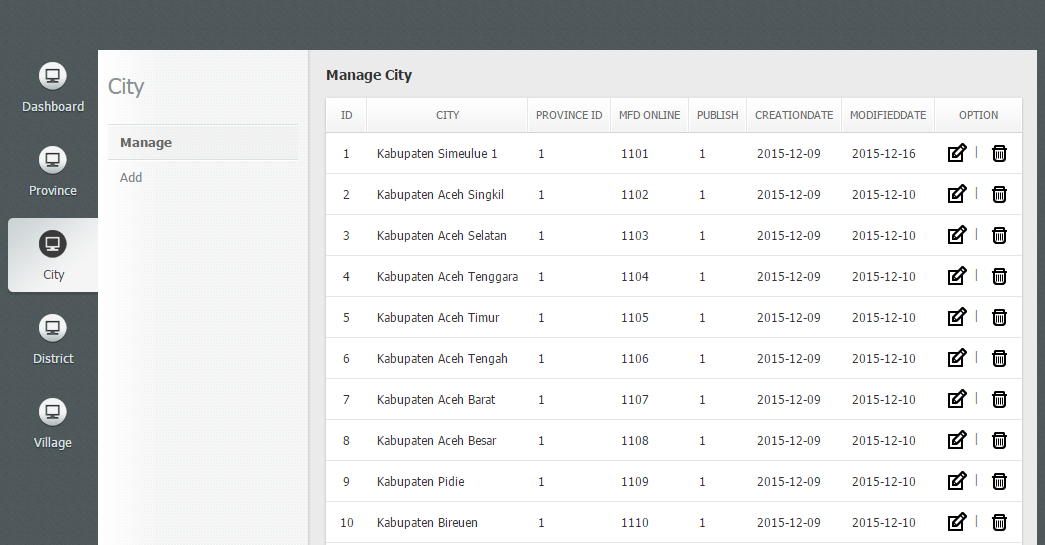
1. **Kabupaten / Kota**
2. Insert



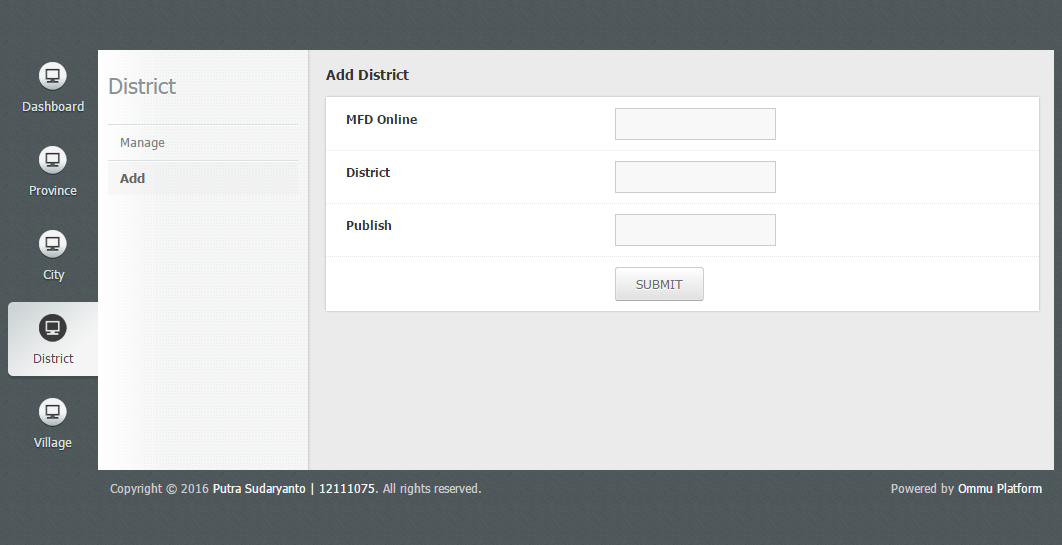
1. Update



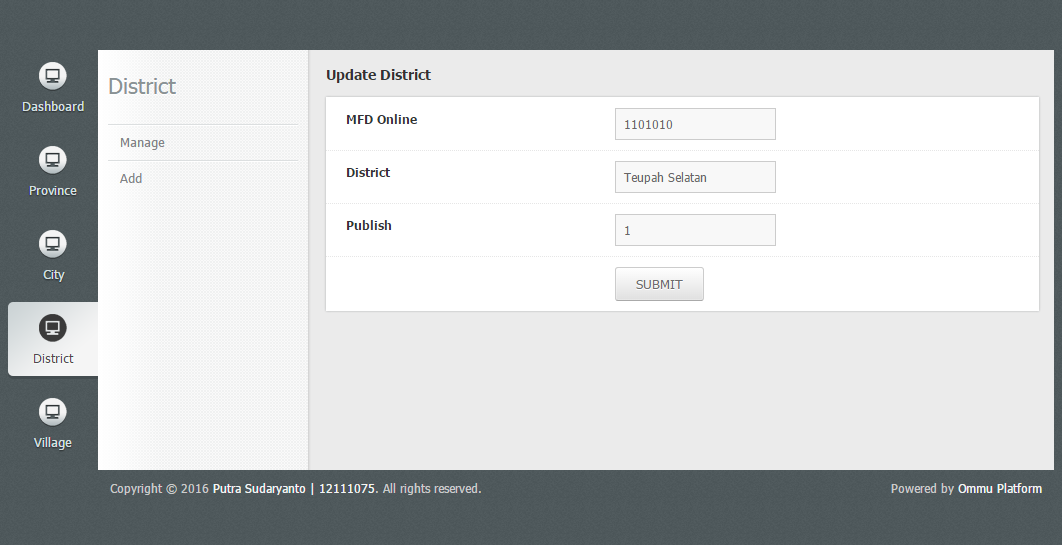
1. View



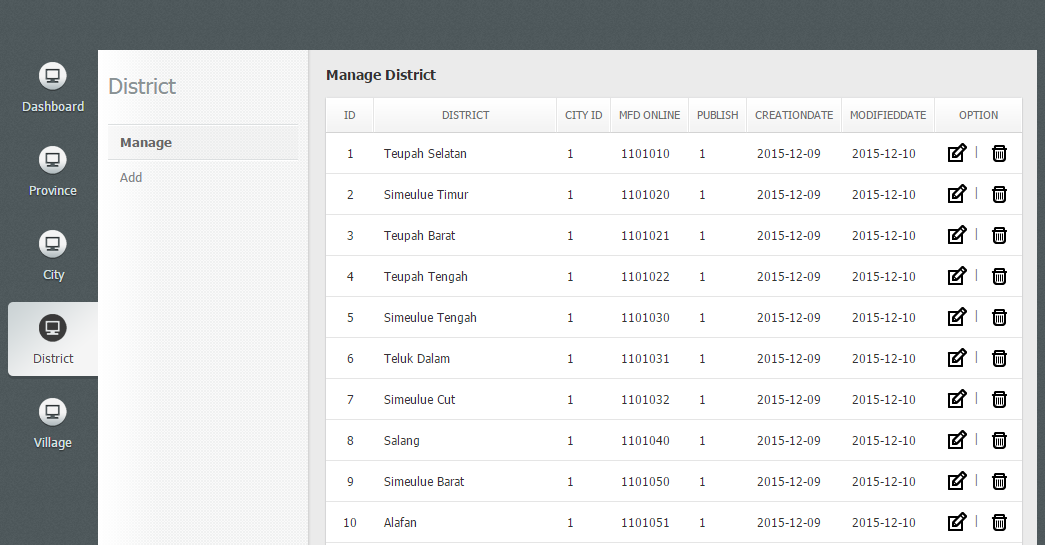
1. **Kecamatan**
2. Insert



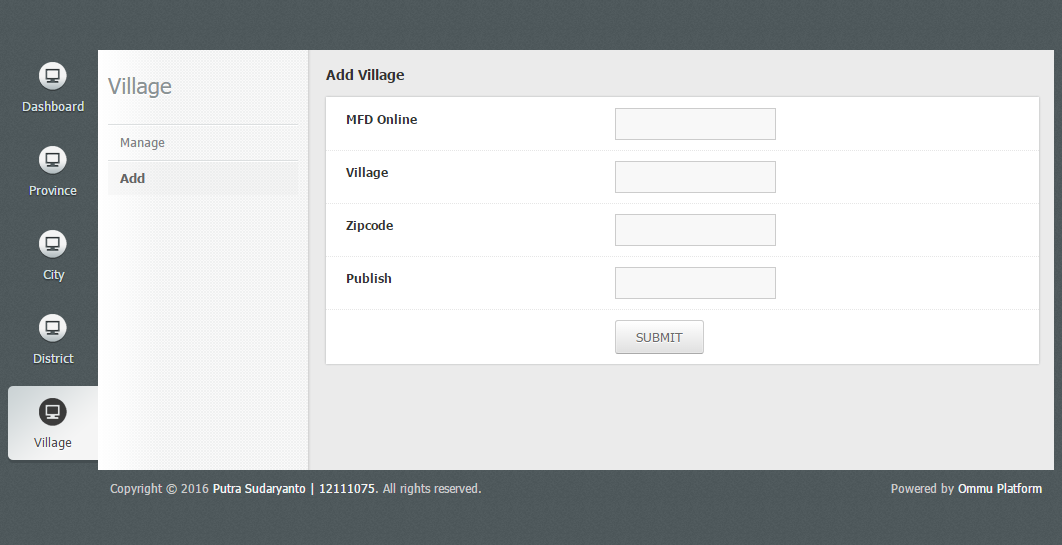
1. Update



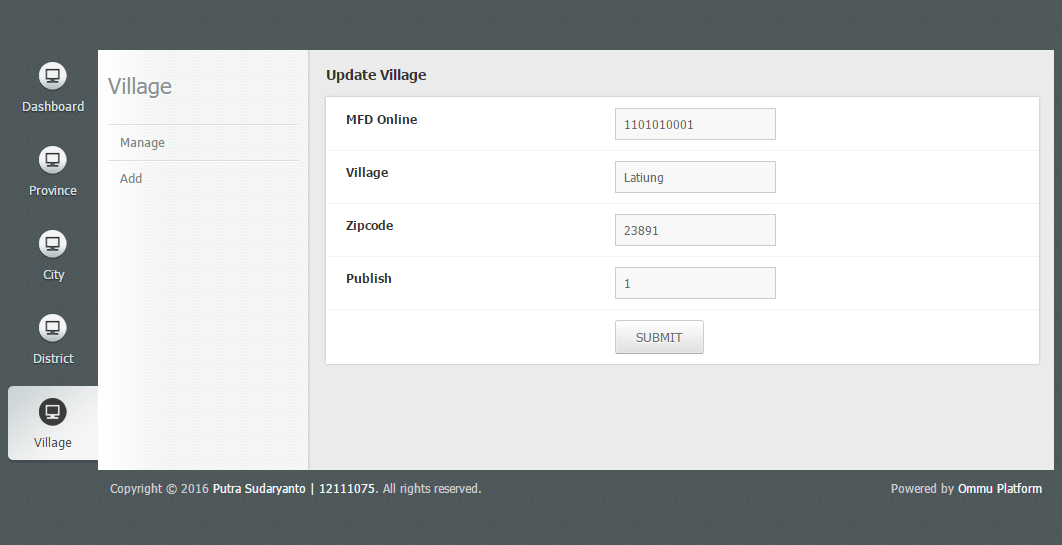
1. View



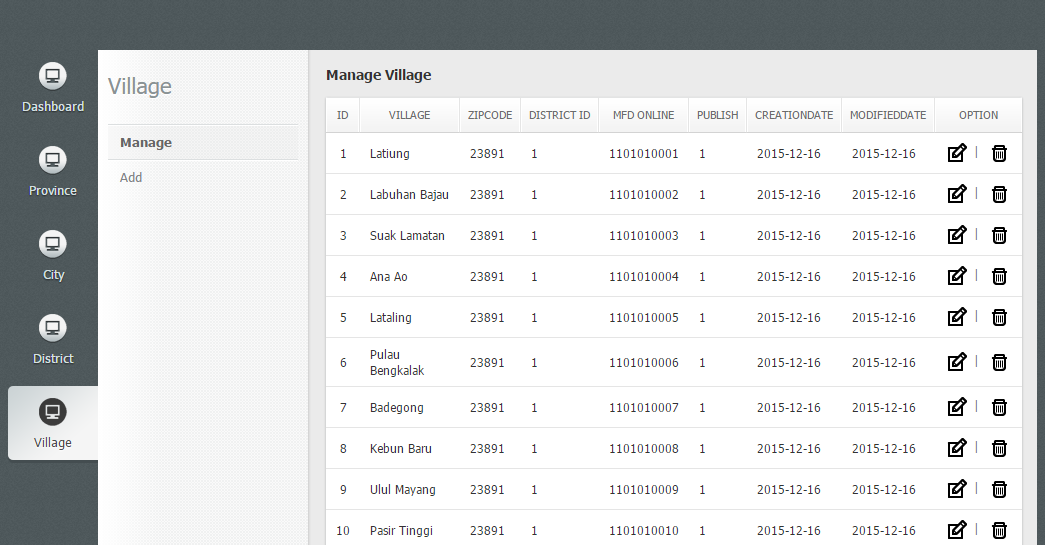
1. **Desa / Kelurahan**
2. Insert



1. Update



1. View



# **BAB IV MENU, STRUCTURE DAN TESTING**

1. **Menu**

|  |  |  |
| --- | --- | --- |
| **Mainmenu** | **Submenu** | **Content Menu** |
| Dashboard | Manage | Update |
| Delete |
| Add | - |
| Province | Manage | Update |
| Delete |
| Add | - |
| City | Manage | Update |
| Delete |
| Add | - |
| District | Manage | Update |
| Delete |
| Add | - |
| Village | Manage | Update |
| Delete |
| Add | - |

1. **Structure**

* Controller
* City.java
* District.java
* Province.java
* Village.java
* Site.java
* Database
* Database.java
* Model
* CityModel.java
* DistrictModel.java
* ProvinceModel.java
* VillageModel.java
* Page
* CityPage.java
* DistrictPage.java
* ProvincePage.java
* VillagePage.java
* View
* City
* admin\_delete.jsp
* admin\_form.jsp
* admin\_manage.jsp
* District
* admin\_delete.jsp
* admin\_form.jsp
* admin\_manage.jsp
* Province
* admin\_delete.jsp
* admin\_form.jsp
* admin\_manage.jsp
* Site
* admin\_delete.jsp
* admin\_form.jsp
* admin\_manage.jsp
* Village
* admin\_delete.jsp
* admin\_form.jsp
* admin\_manage.jsp
* web.xml

1. **Testing Aplikasi**

|  |  |  |  |
| --- | --- | --- | --- |
| **Mainmenu** | **Function Menu** | **Result** | |
| **Yes** | **No** |
| Dashboard | Manage | √ |  |
| Add | √ |  |
| Update | √ |  |
| Delete | √ |  |
| Province | Manage | √ |  |
| Add | √ |  |
| Update | √ |  |
| Delete | √ |  |
| City | Manage | √ |  |
| Add | √ |  |
| Update | √ |  |
| Delete | √ |  |
| District | Manage | √ |  |
| Add | √ |  |
| Update | √ |  |
| Delete | √ |  |
| Village | Manage | √ |  |
| Add | √ |  |
| Update | √ |  |
| Delete | √ |  |

# **BAB V PENUTUP**

1. **Kesimpulan**

Aplikasi yang dikembangkan dengan bahasa pemrograman Java tidah hanya selalu berupa aplikasi desktop tapi juga bisa berupa aplikasi berbasis website. Dengan bantuan JDBC kita bisa mengembangkan sebuah aplikasi berbasis website dengan bahasa pemrograman java yang bersifat dinamis dan terhubung dengan dengan basis data.

1. **Kesulitan**

Kesulitan yang saya alami dalam mengembangkan aplikasi berbasis website dengan Bahasa pemrograman java dan fitur JDBC, diantaranya:

1. Model, untuk memasukkan sebuah value hasil dari relation database harus mendefiniskan variable yang akan dimasukkan. Sering terjadi kesalahan dan keluapaan nama variable karena netbean tidak ada suggestion nama variable.
2. Berbeda dengan nama variable yang dapat digunakan, untuk java \_ (underscore) tidak bisa digunakan dengan error *properly,* ini yang menjadikan java tidak terlalu familiar dibandingkan bahasa pemrograman yang lain.
3. Dropdown, Autosuggest, Checkbox and Radio Condition (Validation), terlalu manual
4. Dalan kesulitan-kesulitan lainnya.. ☺ ☺