

## *APPENDIX*

```
$con= new controller();
$con2= new Similarity();
```

### Query untuk membaca SMS yang belum diproses

```
$query = "SELECT * FROM inbox WHERE Processed = 'false'";
$hasil = mysqli_query($mysqli,$query);
$msgArr = array();
$msgArr = array_map('strtolower', $msgArr);
$idArr = array();
$noHpArr = array();
$proses = array();
while ($data = mysqli_fetch_array($hasil))
{
```

#### Membaca ID SMS

```
$id = $data['ID'];
```

#### Membaca no pengirim

```
$noPengirim = $data['SenderNumber'];
```

```
$msg = strtolower($data['TextDecoded']);
array_push($msgArr,$msg);
array_push($idArr,$id);
array_push($noHpArr,$noPengirim);
array_push($proses,$data['Processed']);
}
```

#### Mencari array dengan kata false

```
if(array_search("false",$proses) != '' ||
array_search("false",$proses) != NULL ){
$hasilArr = array();
foreach ($msgArr as $msg) {
$pesan= $con->filtering($msg);
$words = explode(" ",$pesan);
$con->setStopWord($words);
$filteringdata = $con->proses_stopword();
$filteringdata = array_unique($filteringdata);
$hasil = implode(" ",$filteringdata);
array_push($hasilArr,$hasil);
}
```

**SMS kategori**

```

$kategori = array();
$query = "SELECT * FROM sms_kategori";
$hasil = mysqli_query($mysqli,$query);
while ($data = mysqli_fetch_array($hasil))
{

```

**Membaca ID**

```

$id = $data['id'];

```

**Membaca nama**

```

$nmkategori = $data['nama'];

```

**Cek kategori**

```

if( !in_array($nmkategori,$kategori))
array_push($kategori,$nmkategori);
}

```

**Ambil array pertama**

```

$text = $msgArr[0];
$split = explode(" ", $text);

```

**Manggil function dot2**

```

$dot = Similarity::dot2($split);

```

```

$target1 = array('ruang');
$target2 = array('jam');
$target3 = array('hari');

```

**Manggil function cosine**

```

$nilai1 = Similarity::cosine($target1, $split, $dot);
$nilai2 = Similarity::cosine($target2, $split, $dot);
$nilai3 = Similarity::cosine($target3, $split, $dot);

```

**Cek kategori**

```

if($nilai1>$nilai2 && $nilai1>$nilai3){
$kategori2='ruang';
}
if($nilai2>$nilai1 && $nilai2>$nilai3){
$kategori2='jam';
}
if($nilai3>$nilai1 && $nilai3>$nilai2){

```

```

$kategori2='hari';
}else{
if(strchr($text, 'ruang') == true){
$kategori2 = 'ruang';
}else if(strchr($text, 'jam') == true){
$kategori2 = 'jam';
}else if(strchr($text, 'hari') == true){
$kategori2 = 'hari';
}else{
$kategori2='kosong';
}
}
}

```

#### Menampung dataset makul

```

$query = "SELECT makul FROM sms_jadwalmakul";
$hasil = mysqli_query($mysqli,$query);
$makulArr=array();
while ($data = mysqli_fetch_array($hasil))
{

```

#### Ambil data kolom makul

```

$makul = $data['makul'];

array_push($makulArr,$makul);
}
$makArr=[];

```

#### Mencari makul didatabase dengan yang ditanyakan ada atau tidak

```

foreach ($makulArr as $mak) {
if (str_contains(strtolower($msgArr[0]),
strtolower($mak))) {
array_push($makArr,$mak);
}
}
}
$i=0;
$katArr=[[ $kategori2]];
$hasilreply=[];
if($katArr!=[]){

```

#### Cek pertanyaan masuk kategori mana

```

foreach ($katArr as $kat) {

if (in_array("ruang", $kat))

```

```

{
$query = "SELECT ruang FROM sms_jadwalmakul
WHERE makul='$makArr[0]' LIMIT 1";
$result = $mysqli -> query($query) or
die($mysqli->error);
$reply = $result -> fetch_assoc();
array_push($hasilreply,$reply);
}
else if (in_array("jam", $kat))
{
$query = "SELECT jam FROM sms_jadwalmakul
WHERE makul='$makArr[0]' LIMIT 1";
$result = $mysqli -> query($query) or
die($mysqli->error);
$reply = $result -> fetch_assoc();
array_push($hasilreply,$reply);
}
else if (in_array("hari", $kat))
{
$query = "SELECT hari FROM sms_jadwalmakul
WHERE makul='$makArr[0]' LIMIT 1";
$result = $mysqli -> query($query) or
die($mysqli->error);
$reply = $result -> fetch_assoc();
array_push($hasilreply,$reply);
}
else
{
$reply = [];
array_push($hasilreply,$reply);
}
if (!isset($noHpArr[$i]) || !isset($idArr[$i]) ||
!isset($hasilreply[0])) {
return;
} else {

```

**Ambil data pertama kalinya**

```
$a=$hasilreply[0];
```

**Reply jika tidak termasuk dikategori**

```
if($a==' ' || $a==null){
```



```
ksort($tags);
return $tags;
}
static public function dot2($tags) {
$tags = array_unique($tags);
$tags = array_fill_keys($tags, 0);
ksort($tags);
return $tags;
}
static public function dot_product($a, $b) {
$products = array_map(function($a, $b) {
return $a * $b;
}, $a, $b);
return array_reduce($products, function($a, $b) {
return $a + $b;
});
}
static public function magnitude($point) {
$squares = array_map(function($x) {
return pow($x, 2);
}, $point);
return sqrt(array_reduce($squares, function($a, $b) {
return $a + $b;
}));
}
static public function cosine($a, $b, $base) {
$a = array_fill_keys($a, 1) + $base;
$b = array_fill_keys($b, 1) + $base;
ksort($a);
ksort($b);
return self::dot_product($a, $b) / (self::magnitude($a) *
self::magnitude($b));
}
}
```

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