GURU TEGH BAHADUR INSTITUTE OF TECHNOLOGY

WIRELESS COMMUNICATION

Name - Manmeet Singh

Enroll No. - 05513203117

Section - IT-1

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Experiment No. 1

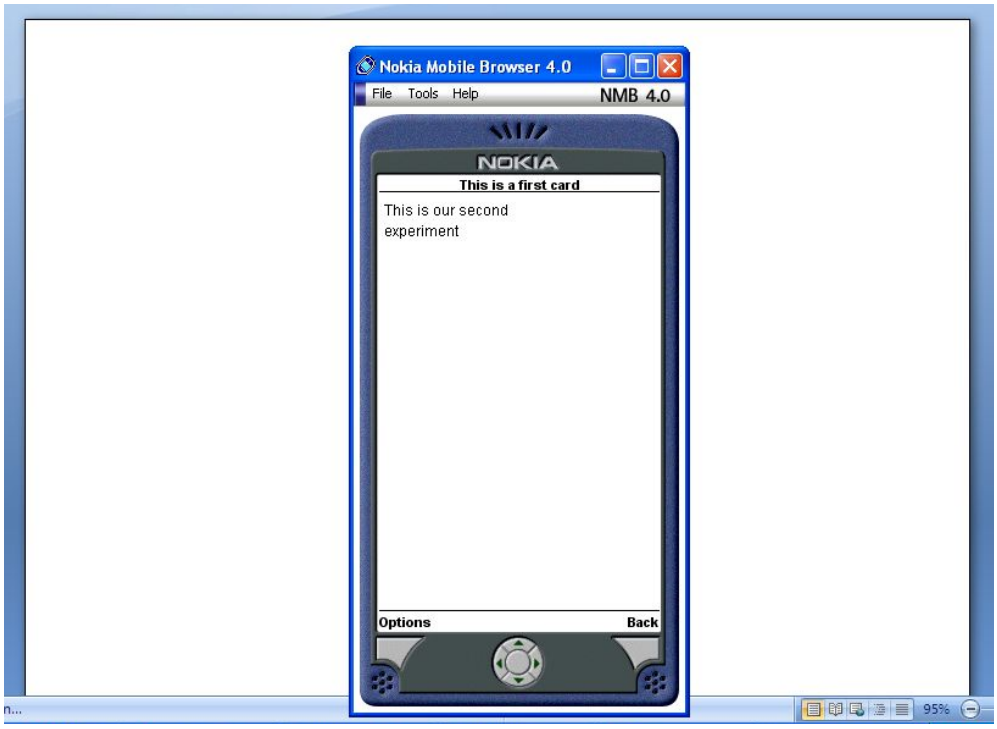
Aim:- Write a Program to create line break in WML

Requirements:- Nokia Mobile Internet toolkit

Code

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
  <card id="MainCard" title="This is a first card">
<p>This is our second  <br/> experiment</p>
</card>
 </wml>
```

Output:


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
This is a first card
This is our second
experiment
Options
Back
95%

Experiment No-2

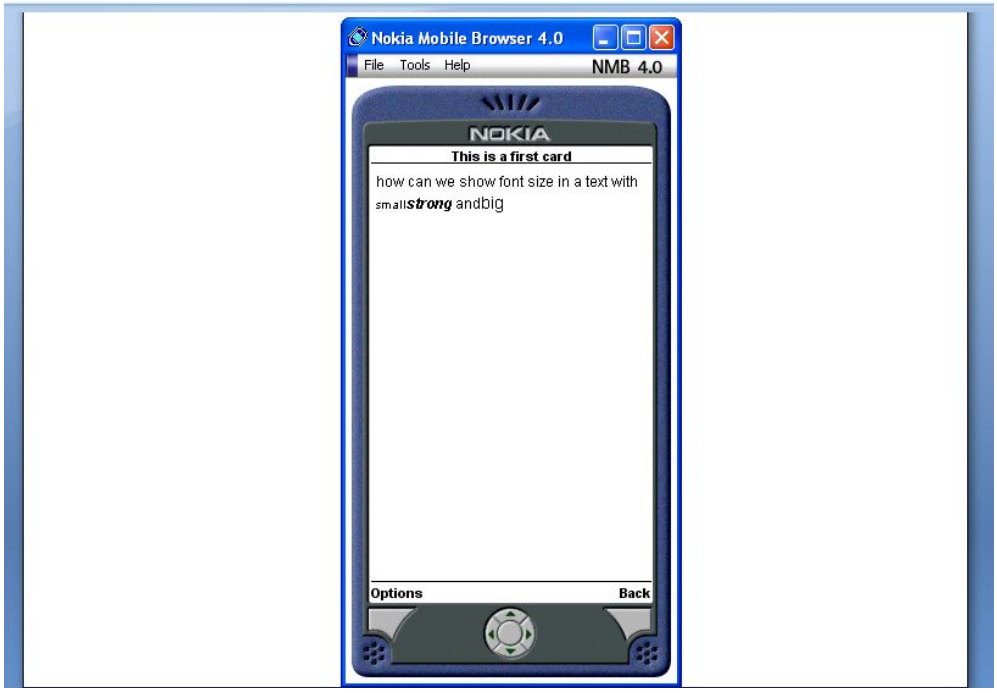
AIM: Write a program in WML to illustrate the font size.

Requirements:- Nokia Mobile internet Toolkit.

Code

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>

 <card id="MainCard" title="This is a first card">
<p>how can we show font size in a text with
<small>small</small>
<i><strong>strong </strong></i>and<big>big</big>
</p>
</card>
</wml>
```

Output:


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
This is a first card
how can we show font size in a text with
smallstrong andbig
Options
Back

Experiment No. 3

Aim:- Program to make a table in the WML card.

Requirements:- Nokia Mobile internet Toolkit.

Code:

```
<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"

   "http://www.wapforum.org/DTD/wml13.dtd">

<wml>

<!-- THIS IS THE FIRST CARD IN THE DECK -->

<card id="pooja" title="This is a first card">

<p align="center">

<table columns="3">

<tr>

<td>cell1</td>

<td>cell2</td>

<td>cell3</td>

</tr>

<tr>

<td>1</td>

<td>2</td>

<td>3</td>
```

</tr>

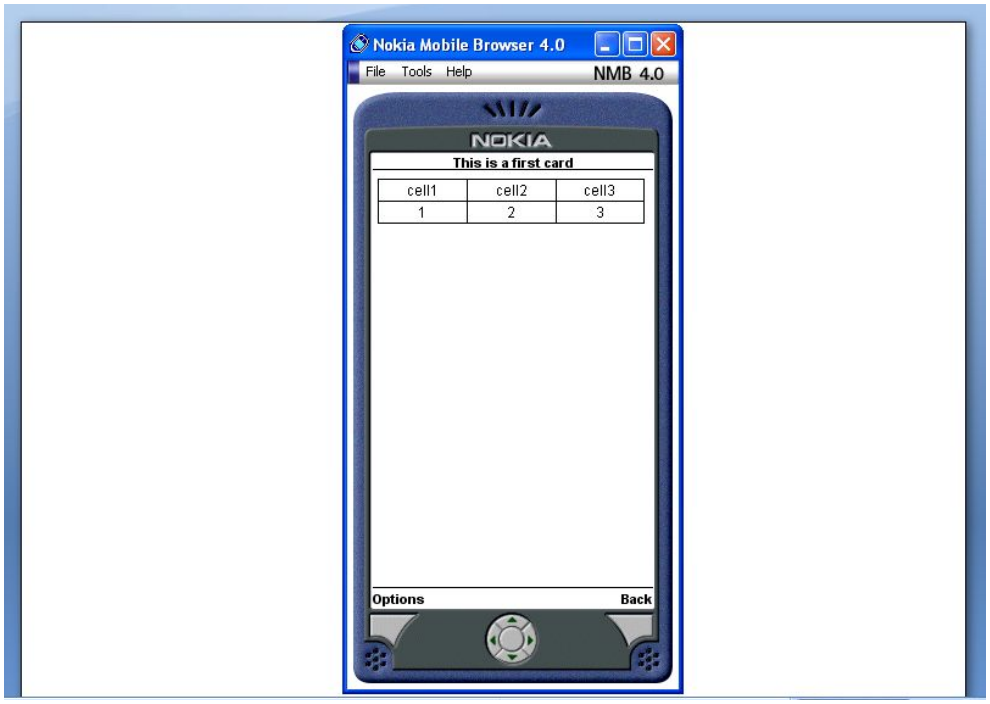
</table>

</p>

</card>

</wml>

Output:



Experiment No-4

AIM: Write a program with two cards one for user input and other for displaying the result.

Requirements:- Nokia Mobile internet Toolkit.

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
  <card id="CARD1" title="TUTORIAL">
 <p>
                              <do type="ACCEPT" label="MY_SUBJECT">
                              <go href="#CARD2"/>
                              </do>
                              <select name="NAME">
                              <option value="Hindi">HINDI </option>
                              <option value="English">ENGLISH</option>
                              <option value="Maths">MATHS</option>
                              </select>
</p>
   </card>
 <card id="CARD2" title="MY_SUBJECT">
```

```
  <p>YOU SELECTED: $(NAME)</p>

</card></wml>
```

Output:

Experiment No. 5

Aim:- Write a Program to introduce input box in a WML form.

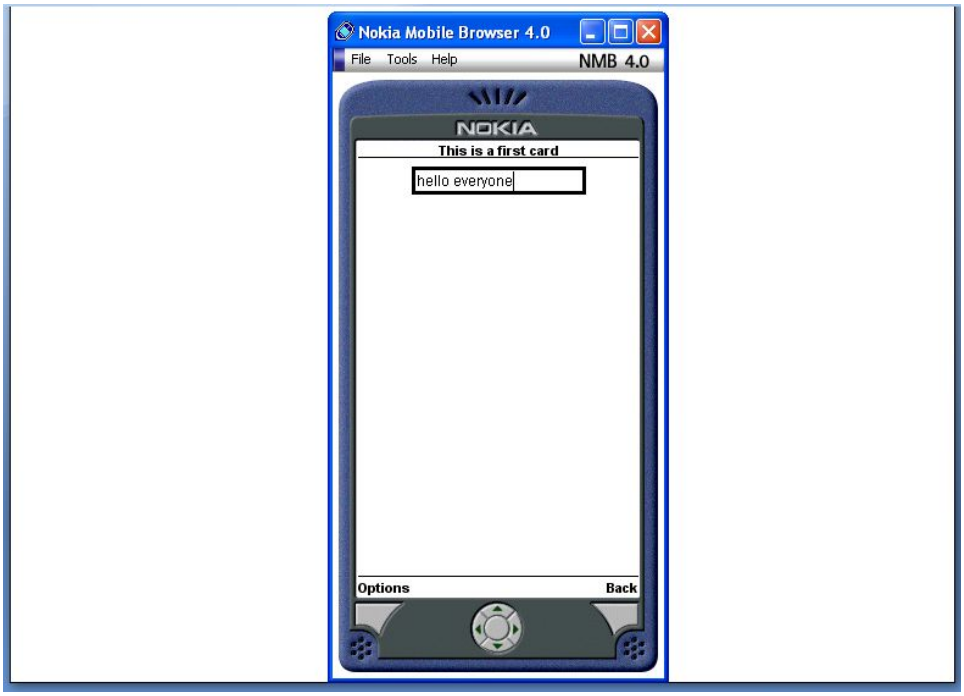
Requirements:- Nokia Mobile internet Toolkit.

Code

```
<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"

    "http://www.wapforum.org/DTD/wml13.dtd">

<wml>

  <!-- THIS IS THE FIRST CARD IN THE DECK -->

<card id="ankit" title="This is a first card">

<p align="center">

Name:<input type=”text”  name="Name" size="15"/>
```

```
</p>

</card>

</wml>
```

Output:



Experiment No. 6

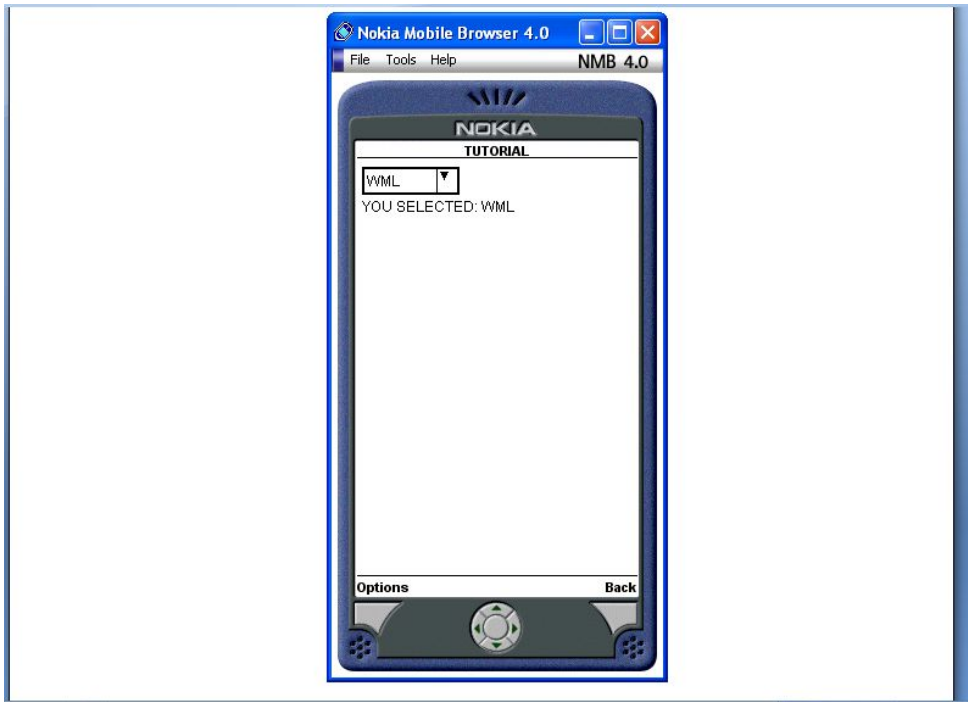
Aim:- Write a Program to a variable and its value in WML form.

Requirements:- Nokia Mobile internet Toolkit.

Code:

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
  <card id="CARD1" title="TUTORIAL">
  <p>
                                <select name="NAME">
                                <option value="WML">WML </option>
                                <option value="HTML">HTML</option>
                                <option value="Xml">XML</option>
                                </select>
            <do type="ACCEPT" label="MY_SUBJECT">
                                <go href="#CARD1"/>
                                </do>
                        YOU SELECTED: $(NAME)</p>
  </card>
</wml>
```

Output:



Experiment No. 7

Aim:- Write a program to perform navigation between WML cards (forward and backward both)

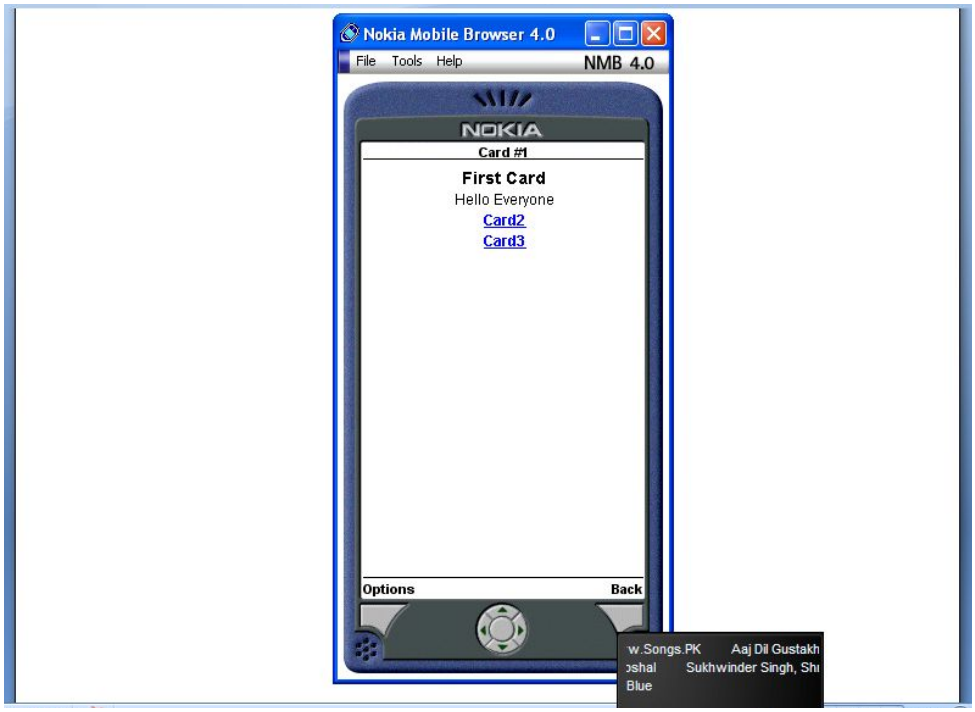
Requirements:- Nokia Mobile internet Toolkit.

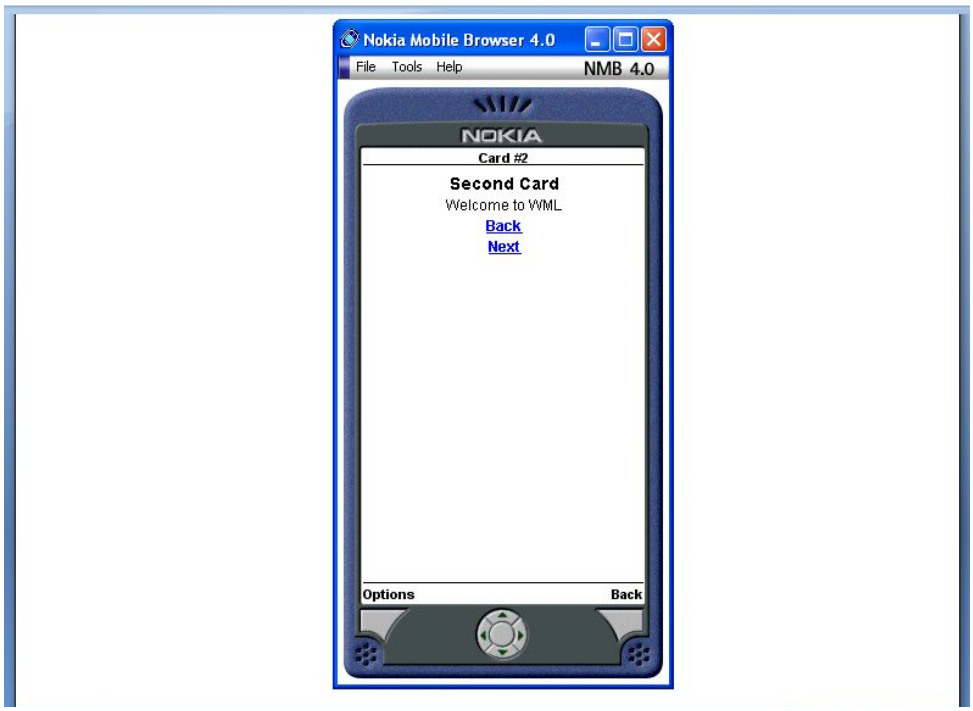
Code:

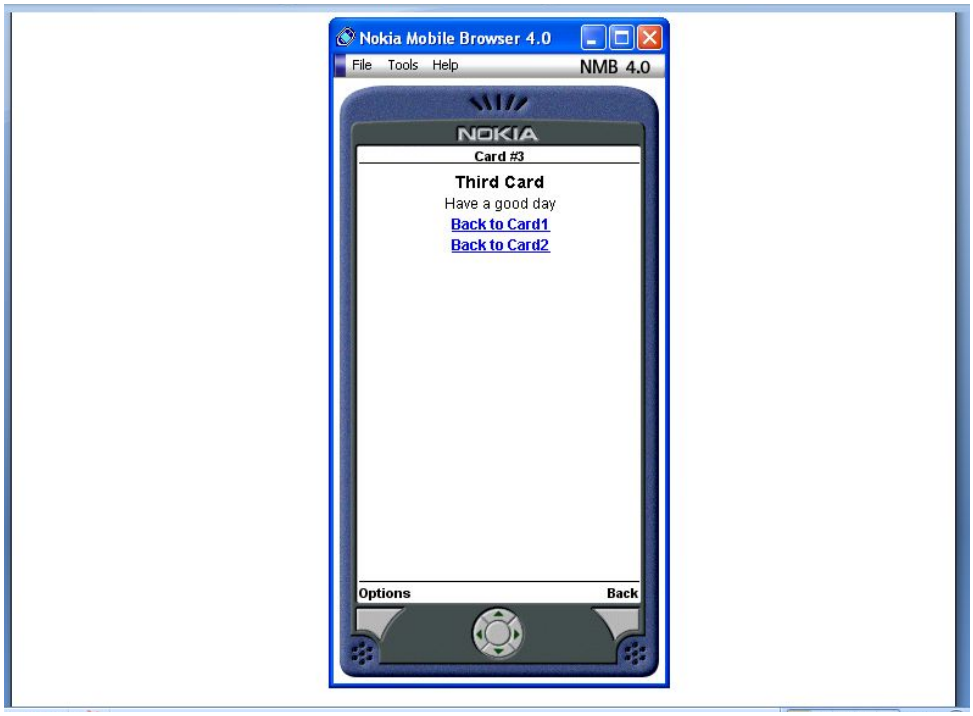
```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
  <card id="c1" title="Card #1">
   <p align="center">
 <big><b>First Card</b></big><br/>
 Hello Everyone<br/>
<a href="#c2">Card2</a><br/>
<a href="#c3">Card3</a><br/>
   </p>
 </card>
<card id="c2" title="Card #2">
      <p align="center">
    <big><b>Second Card</b></big><br/>
Welcome to WML<br/>
<a href="#c1">Back</a><br/>
<a href="#c3">Next</a><br/>
   </p>
</card>
<card id="c3" title="Card #3">
<p align="center">
```

```
<big><b>Third Card</b></big><br/>

Have a good day<br/>

<a href="#c1"> Back to Card1</a><br/>

<a href="#c2"> Back to Card2</a><br/>

</p>

</card>

</wml>
```

Output:


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
Card #1
First Card
Hello Everyone
Card2
Card3
Options
Back
w.Songs.PK
Aaj Dil Gustakh
oshal
Sukhwinder Singh, Shi
Blue


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
Card #2
Second Card
Welcome to WML
Back
Next
Options
Back



Experiment No. 8

Aim:- Write a Program to activate the current card in WML

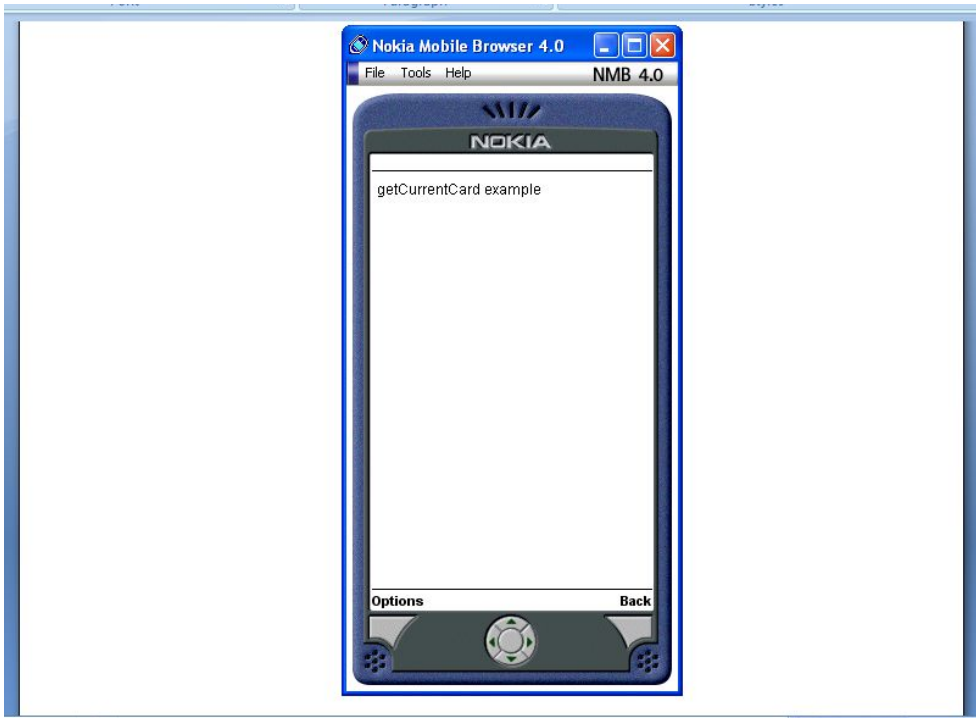
Requirements:- Nokia Mobile Internet toolkit

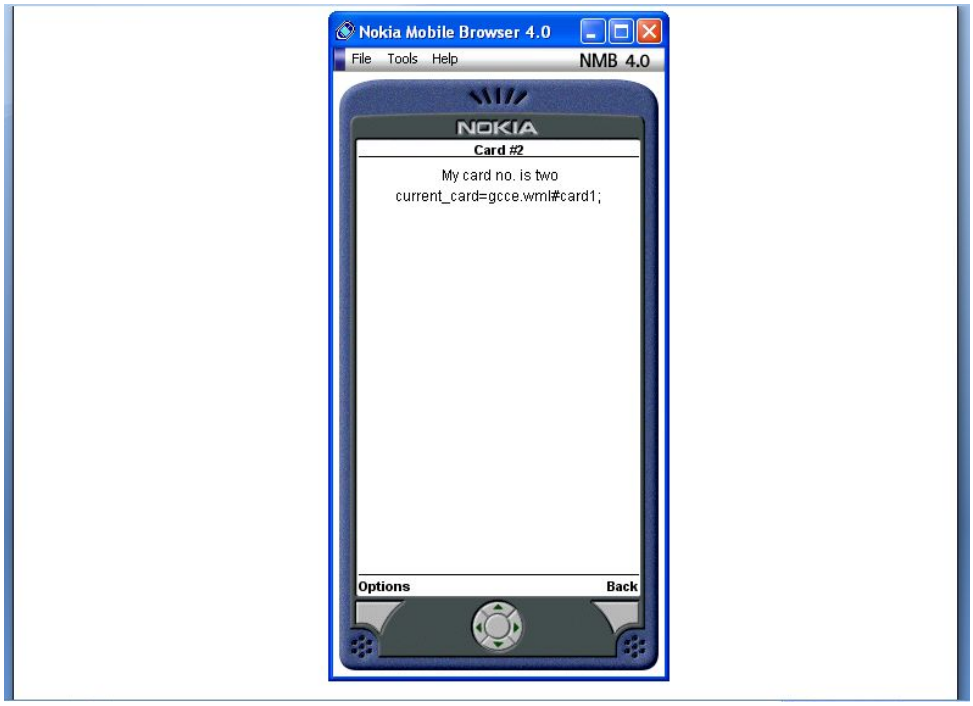
Code

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
 <card id="card1" title="Card #1">
 <p>
get current example</p>
<do type="accept">
<go href="GetCurrentCardEg.wmls#find()"/>
</do>
 </card>
 <card id="card2" title="Card #2">
      <p align="center">
My card no. is two <br/>
current_card=$(currentcard);
   </p>
 </card>
</wml>
```

Script File:

```
extern function find() {
  var curcard=WMLBrowser.getCurrentCard();
WMLBrowser.setVar("currentcard",curcard);
WMLBrowser.go("GCCE.wml#card2");
}
```


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
getCurrentCard example
Options
Back


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
Card #2
My card no. is two
current_card=gcce.wml#card1;
Options
Back

EXPERIMENT-9

AIM: Write a program in wml to print a message using WML script.

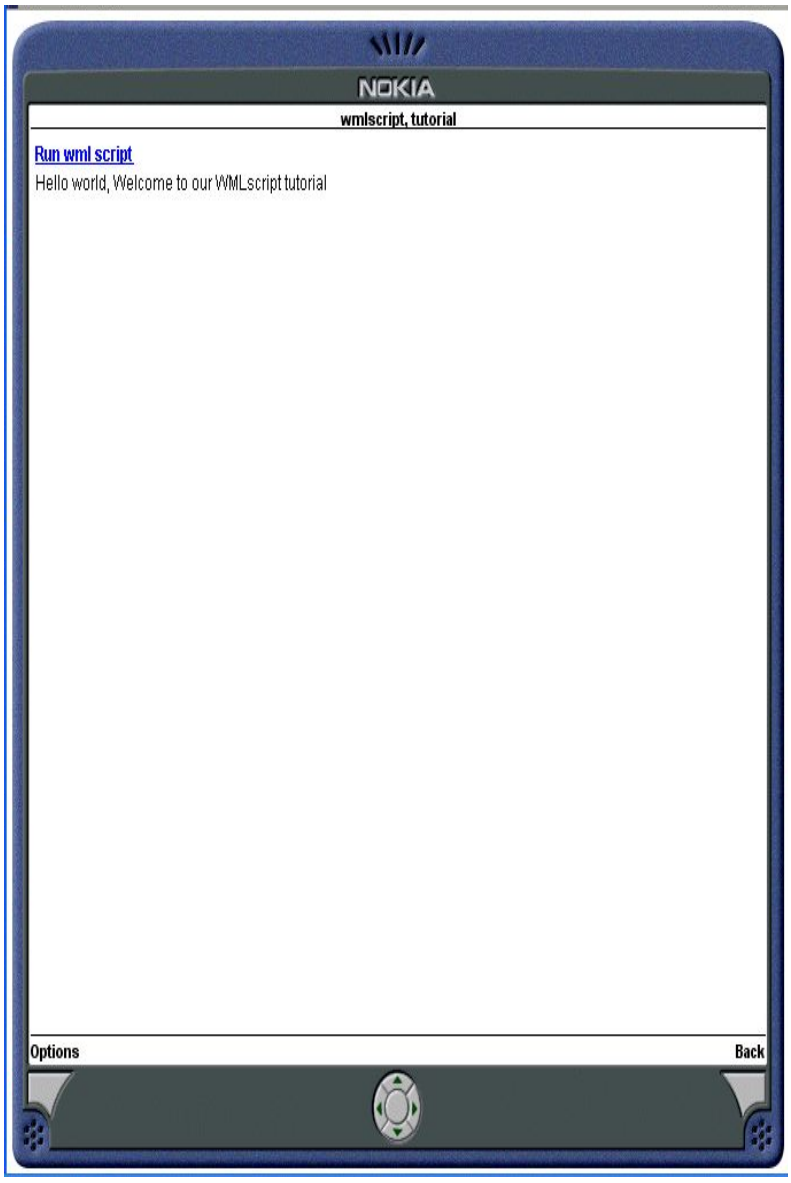
CODE:

```
<?xml version="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">

<wml>

        <card id="card1" title="wmlscript, tutorial">

        <p>

                <a href="helloworldEg1.wmls#helloworld()">Run wml script</a>

                <br/>

                $(message)

        </p>

        </card>

</wml>
```

WML Script :

```
extern function helloworld()

{

WMLBrowser.setVar("message","Hello world Welcome to my wml tutorial");

WMLBrowser.refresh();


}
```

OUTPUT :


NOKIA
wmlscript, tutorial
Run wml script
Hello world, Welcome to our WMLscript tutorial
Options
Back

EXPERIMENT-10

AIM: Write a program in wml to generate a random number using WML script.

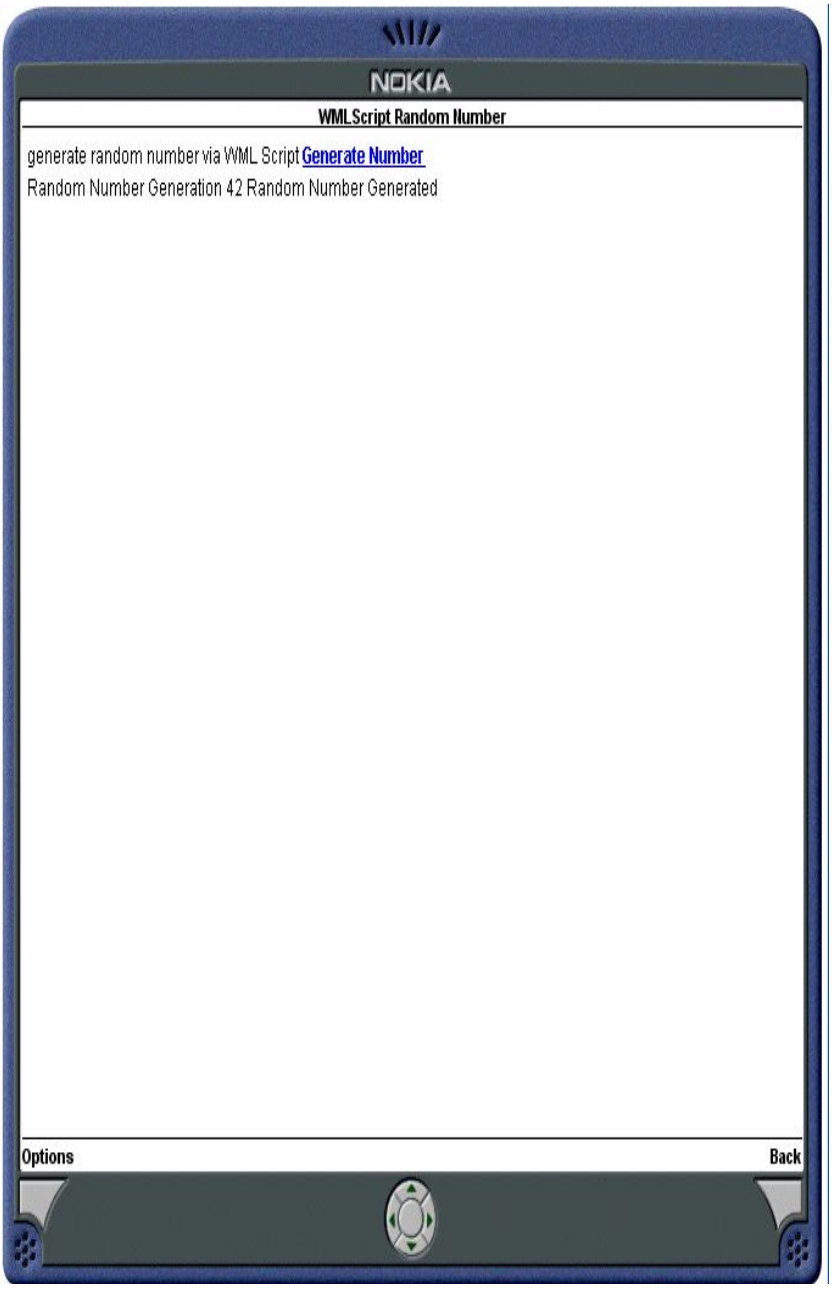
CODE:

```
<?xml version="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">

<wml>

 <card id="card1" title="WMLScript Random Number">

  <p>

generate random number via WML Script

    <a href="random_number.wmls#RandomNumber()">Generate Number</a><br/>

            $(message)

          $(random)

$(message1)

  </p>

 </card>

</wml>
```

WML Script :

```
extern function RandomNumber()

{

WMLBrowser.setVar("message", "Random Number Generation");

WMLBrowser.setVar("random", Lang.random(100) );

WMLBrowser.setVar("message1", "Random Number Generated");

WMLBrowser.refresh();

}
```

OUTPUT :


NOKIA
WMLScript Random Number
generate random number via WML Script Generate Number
Random Number Generation 42 Random Number Generated
Options
Back

Experiment No. 11

Aim:- Write a Program to load a url by WML Script

Requirements:- Nokia Mobile Internet toolkit

Code

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
  <card id="card1" title="Card #1">
  <p>load string example</p>
<do type ="accept">
<go href = "lsp.wmls#load()"/>
</do>
 </card>
 <card id="card2">
<p>
url=$(urlstring);
<br/>
contenttype=$(content_type);
<br/>
loadstring=$(loadstr);
<br/>
```

```
</p>

</card>

</wml>
```

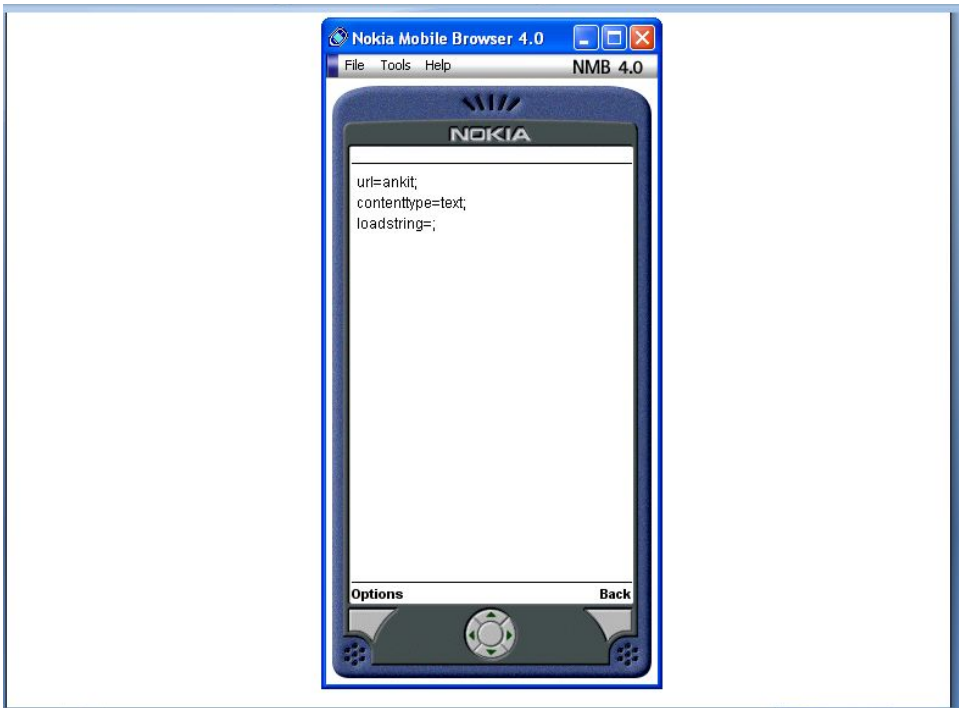
Script File:

```
extern function load() {

  var urlstr=Dialogs.prompt("enter url","");

var ctype=Dialogs.prompt("enter content type","text");

var load=URL.loadString(urlstr,ctype);

WMLBrowser.setVar("urlstring",urlstr);

WMLBrowser.setVar("content_type",ctype);

WMLBrowser.setVar("loadstr",load);

WMLBrowser.go("laod.wml#card2");

}
```

Output:

Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
Card #1
load string example
Options
Back

Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
ABC
Browser
enter url
ankit
OK
Clear


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
url=ankit;
contenttype=text;
loadstring=;
Options
Back

Experiment No. 12

Aim:- Write a Program to call a function by using WML Script to trim a screen.

Requirements:- Nokia Mobile Internet toolkit

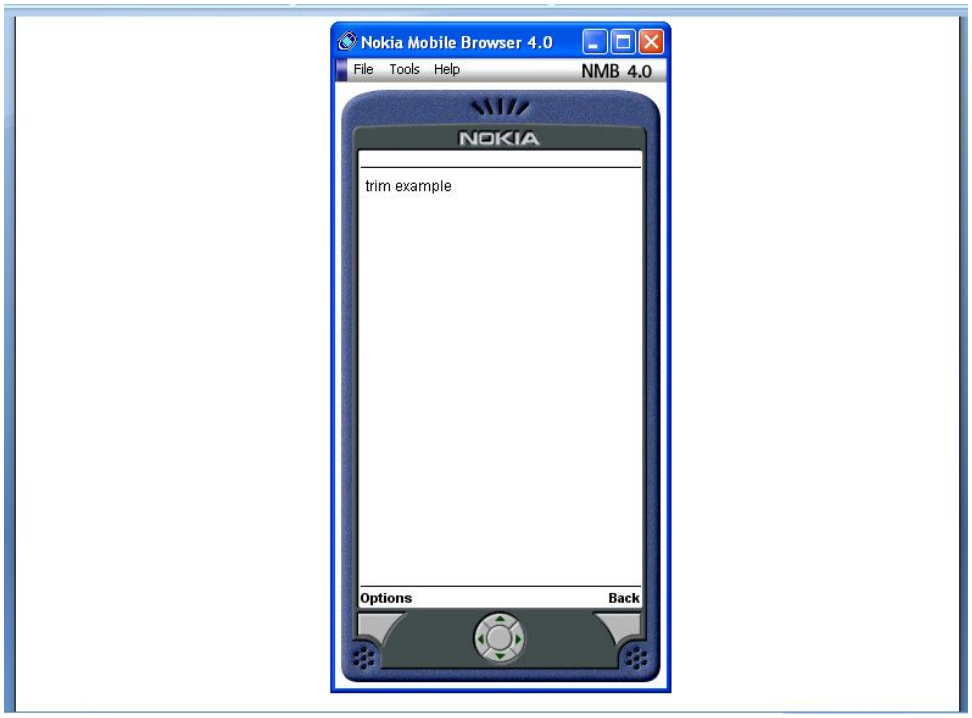
Code

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
    "http://www.wapforum.org/DTD/wml13.dtd">
<wml>
  <card id="c1">
 <p>
trim example</p>
<do type="accept">
<go href="TrimExample.wmls#findtrim()"/>
</do>
</card>
<card id="c2">
<p>
string=$(strng)
<br/>
trim string=$(trimstrng)
</p>
</card>
</wml>
```

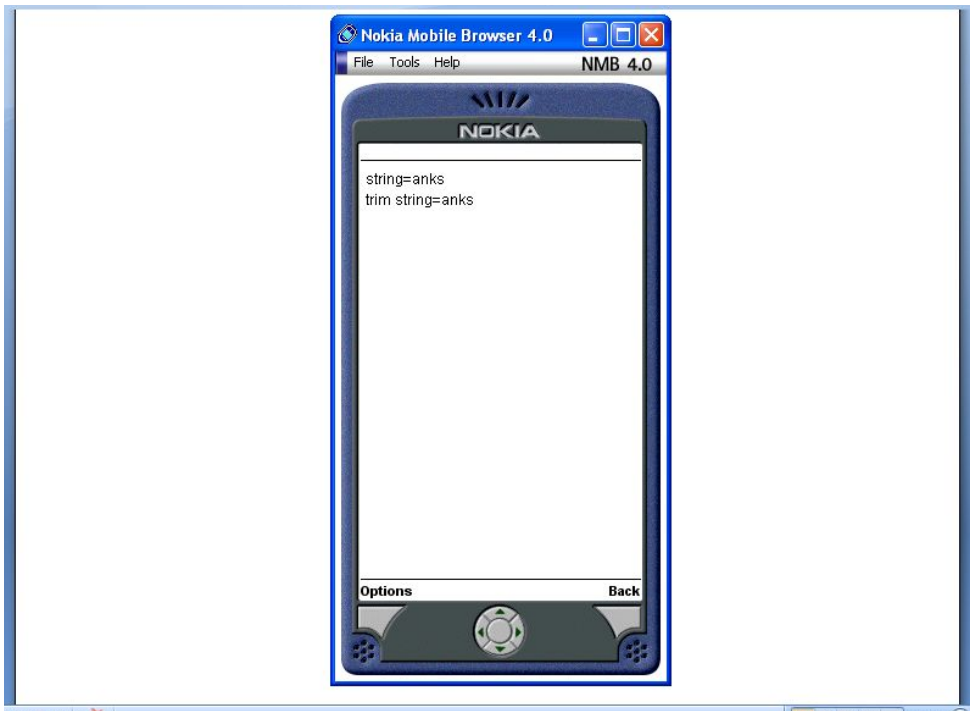
Script File:

```
extern function findtrim() {
  var str= Dialogs.prompt("Enter a string","");
  var trimstr=String.trim(str);
  WMLBrowser.setVar("strng",str);
  WMLBrowser.setVar("trimstrng",trimstr);
 WMLBrowser.go("trm.wml#c2");
}
```

Output:


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
trim example
Options
Back

Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
ABC
Browser
Enter a string
anks
OK
Clear


Nokia Mobile Browser 4.0
File Tools Help
NMB 4.0
NOKIA
string=anks
trim string=anks
Options
Back

EXPERIMENT-13

AIM: Write a program in wml to apply validation on a form using WML script.

CODE:

```
<?xml version="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">


<wml>

 <card id="card1" title="Registration Form">

  <p>

   <big>Registration Form</big><br/>

   Notice: Fields with * are required.<br/><br/>

        Form Validation Check via WML Script

   <b>$(errorMsg)</b><br/>


   * User name:<br/>

   <input name="username"/><br/>

   * Password (min. 8 characters):<br/>

   <input type="password" name="password"/><br/>

   * Email:<br/>

   <input name="email"/><br/>

   Name:<br/>

   <input name="name"/><br/>
```

```
    Birthday (MMDDYYYY):<br/>
    <input name="birthday" format="NNNNNNNN" emptyok="true"/><br/><br/>

    <a href="validate_form.wmls#validate()">Submit Form Data</a>
   </p>
  </card>
</wml>
```

WML Script :

```
extern function validate()
{
  var form_username = String.trim(WMLBrowser.getVar("username"));
  var form_password = String.trim(WMLBrowser.getVar("password"));
  var form_email = String.trim(WMLBrowser.getVar("email"));
  var form_name = String.trim(WMLBrowser.getVar("name"));
  var form_birthday = String.trim(WMLBrowser.getVar("birthday"));

  if (""==form_username){
    WMLBrowser.setVar("errorMsg", "The User Name field must not be empty.");
    WMLBrowser.refresh();
    return;
  }

  if (""==form_password){
```

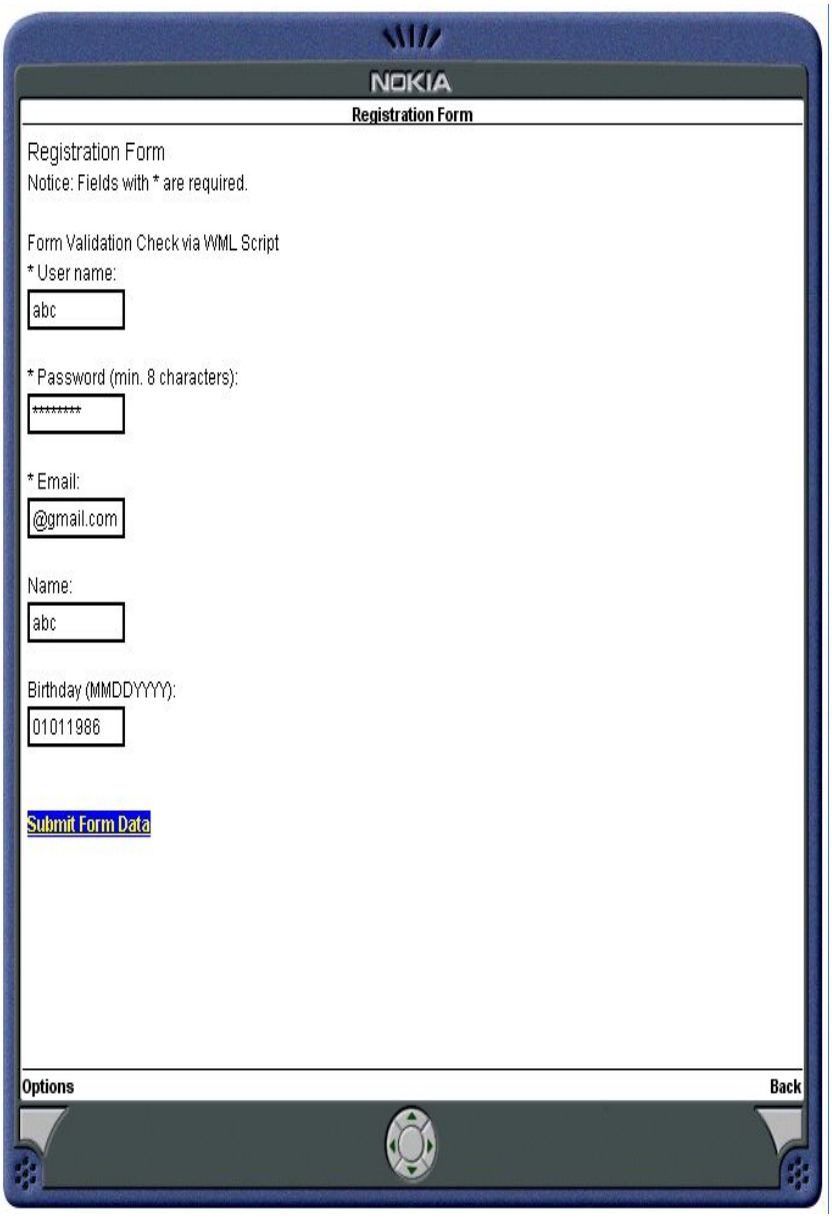
```
WMLBrowser.setVar("errorMsg", "The Password field must not be empty.");
WMLBrowser.refresh();
return;
}

if (""==form_email){
WMLBrowser.setVar("errorMsg", "The Email field must not be empty.");
WMLBrowser.refresh();
return;
}

if (String.length(form_password) < 8){
WMLBrowser.setVar("errorMsg", "The password must contain at least 8 characters
since a short password is less secure.");
WMLBrowser.refresh();
return;
}

if (!isEmailValid(form_email)){
  WMLBrowser.setVar("errorMsg", "The email address's format is invalid.");
  WMLBrowser.refresh();
  return;
}

if (""!=form_birthday && !isDateValid(form_birthday)){
```

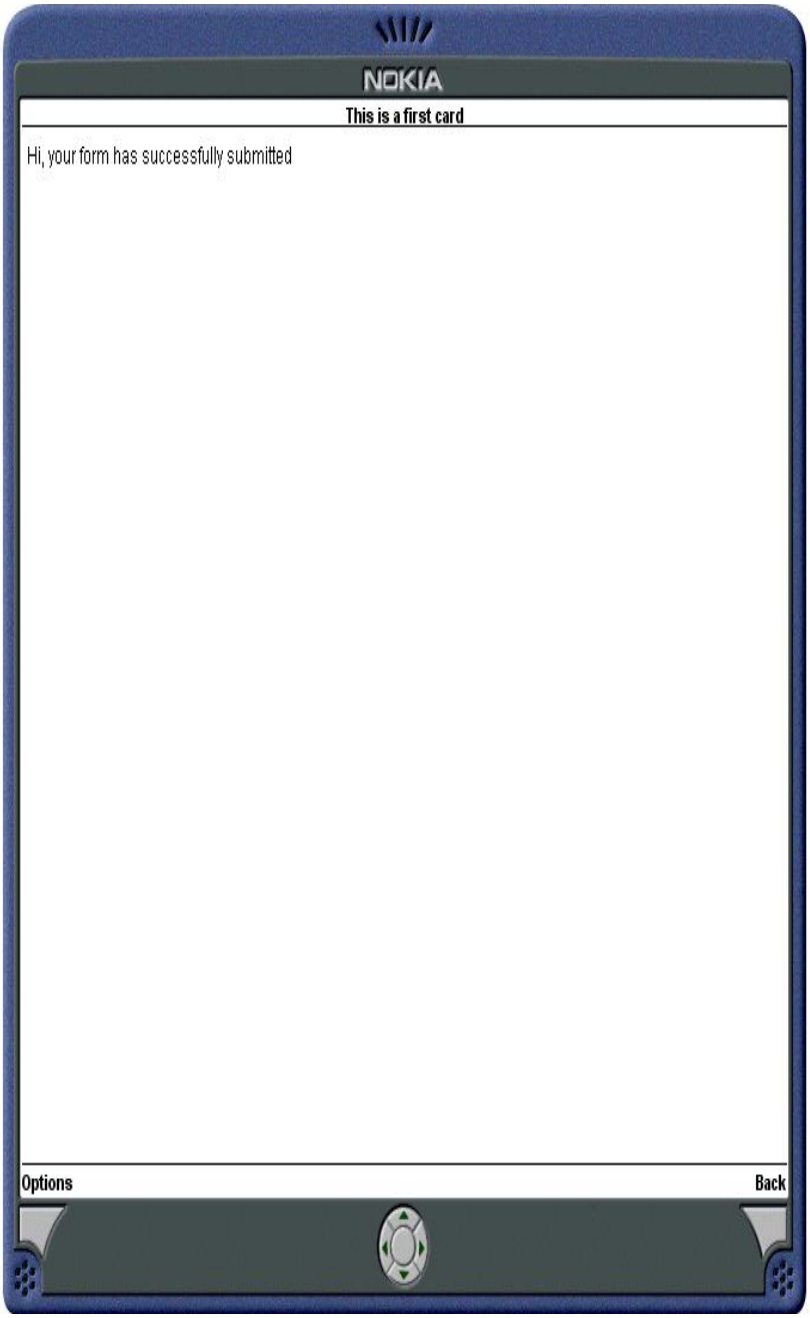
```
   WMLBrowser.setVar("errorMsg", "The date in the Birthday field is invalid.");
   WMLBrowser.refresh();
   return;
  }

 submit_form(form_username, form_password, form_email, form_name, form_birthday);
}

function isEmailValid(emailAddr)
{
  if (String.elements(emailAddr, "@") != 2)
  return false;
  var element_1 = String.elementAt(emailAddr, 0, "@");
  var element_2 = String.elementAt(emailAddr, 1, "@");
  if (""==element_1 || ""==element_2)
  return false;
  return true;
}

function isDateValid(date)
{
  var mm = String.subString(date, 0, 2);
  var dd = String.subString(date, 2, 2);
  var yyyy = String.subString(date, 4, 4);
```

```
  mm = Lang.parseInt(mm);
  dd = Lang.parseInt(dd);
  yyyy = Lang.parseInt(yyyy);

  if (mm<1 || mm>12)
  return false;

  var maxDay = 31;
  if (4==mm || 6==mm || 9==mm || 11==mm)
  maxDay = 30;
  if (2==mm){
  if (0 == yyyy%4)
     maxDay = 29;  // Leap year
   else
     maxDay = 28;
  }

  if (dd<1 || dd>maxDay)
  return false;
  return true;
}

function submit_form(form_username, form_password, form_email, form_name, form_birthday)
{
  WMLBrowser.setVar("errorMsg", "");
```

```
  WMLBrowser.setVar("username", form_username);
  WMLBrowser.setVar("password", form_password);
  WMLBrowser.setVar("email", form_email);
  WMLBrowser.setVar("name", form_name);
  WMLBrowser.setVar("birthday", form_birthday);

  WMLBrowser.go("validateFormEg1_success.wml");
}
```

OUTPUT :


NOKIA
Registration Form
Registration Form
Notice: Fields with * are required.
Form Validation Check via WML Script
* User name:
abc
* Password (min. 8 characters):
****
* Email:
@gmail.com
Name:
abc
Birthday (MMDDYYYY):
01011986
Submit Form Data
Options
Back


NOKIA
This is a first card
Hi, your form has successfully submitted
Options
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EXPERIMENT-14

AIM: Write a program in wml to convert date format using WML script.

CODE:

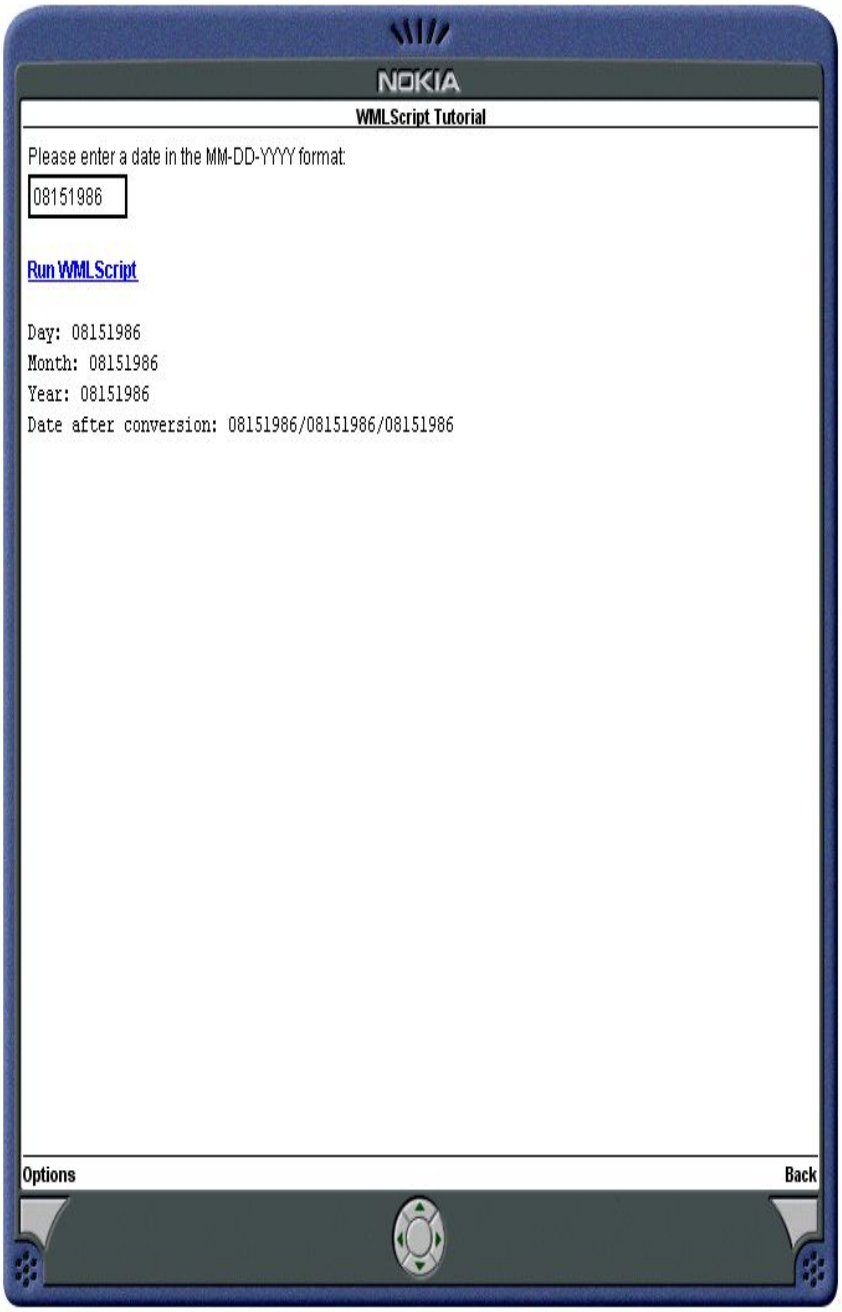
```
<?xml version="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">


<wml>

 <card id="card1" title="WMLScript Tutorial">

   <p>

    Please enter a date in the MM-DD-YYYY format:<br/>

    <input name="datef1"/><br/>


    <a href="passByRefEg1.wmls#changeDateFormat('$(datef1)')">Run WMLScript</a><br/><br/>

   </p>


   <pre>$(result)</pre>

 </card>

</wml>
```

WML Script :

```
extern function changeDateFormat(date)
{
  WMLBrowser.setVar("datef2", date);

  parseDate("datef2", "day", "month", "year");

  var datef2 = WMLBrowser.getVar("datef2");
  var day = WMLBrowser.getVar("day");
  var month = WMLBrowser.getVar("month");
  var year = WMLBrowser.getVar("year");

  WMLBrowser.setVar("result", "Day: " + day + "\nMonth: " + month + "\nYear: " + year + "\nDate after conversion: " + datef2);
  WMLBrowser.refresh();
}

function parseDate(dateWMLVar, dayWMLVar, monthWMLVar, yearWMLVar)
{
  var date = WMLBrowser.getVar(dateWMLVar);
  var month = String.elementAt(date, 0, "-");
  var day = String.elementAt(date, 1, "-");
  var year = String.elementAt(date, 2, "-");
  date = day + "/" + month + "/" + year;

  WMLBrowser.setVar(dateWMLVar, date);
  WMLBrowser.setVar(dayWMLVar, day);
```

```
  WMLBrowser.setVar(monthWMLVar, month);
  WMLBrowser.setVar(yearWMLVar, year);
}
```

OUTPUT :


NOKIA
WMLScript Tutorial
Please enter a date in the MM-DD-YYYY format:
08151986
Run WMLScript
Day: 08151986
Month: 08151986
Year: 08151986
Date after conversion: 08151986/08151986/08151986
Options
Back

EXPERIMENT-15

AIM: Write a program in wml to display an image.

CODE:

```
<?xml version="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
"http://www.wapforum.org/DTD/wml13.dtd">

<wml>

 <card id="card1" title="Image in WML">

  <p>

   <img src="thankyou-monkey.gif" alt="Smile" height="62" width="60" /><br/>
   Welcome to our WML tutorial.
  </p>

 </card>
</wml>
```

OUTPUT :

NOKIA
Image in WML
AWWWW
Thank You!
CommentSexy.com
Welcome to our WML tutorial.
Options
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EXPERIMENT-16

AIM: **Write a program in wml to apply timer tag for 3 sec and display another page after 3sec.**

CODE:

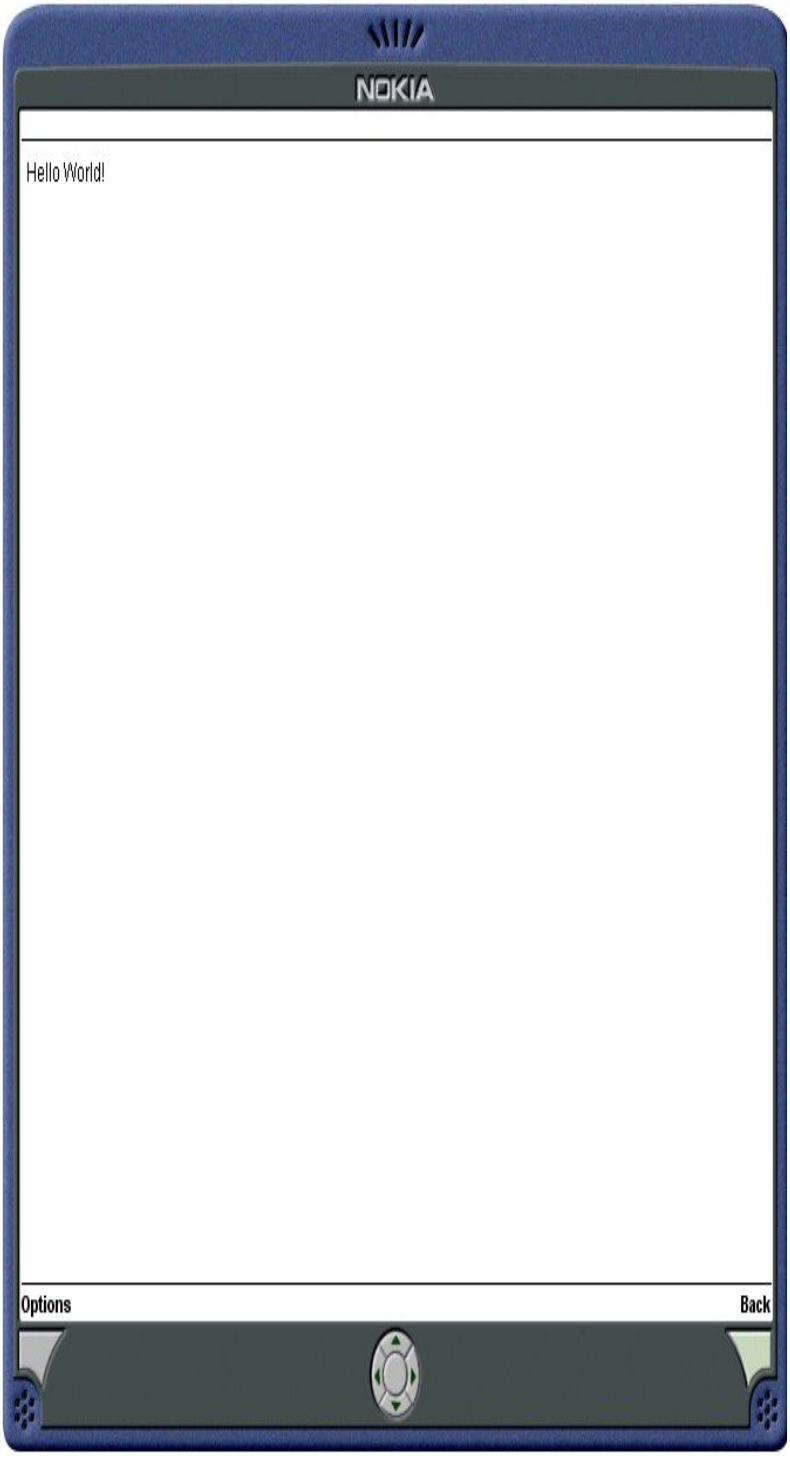
```
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">

<wml>
<card ontimer="test.wml">
  <timer value="30"/>
  <p>Hello World!</p>
</card>
</wml>
```

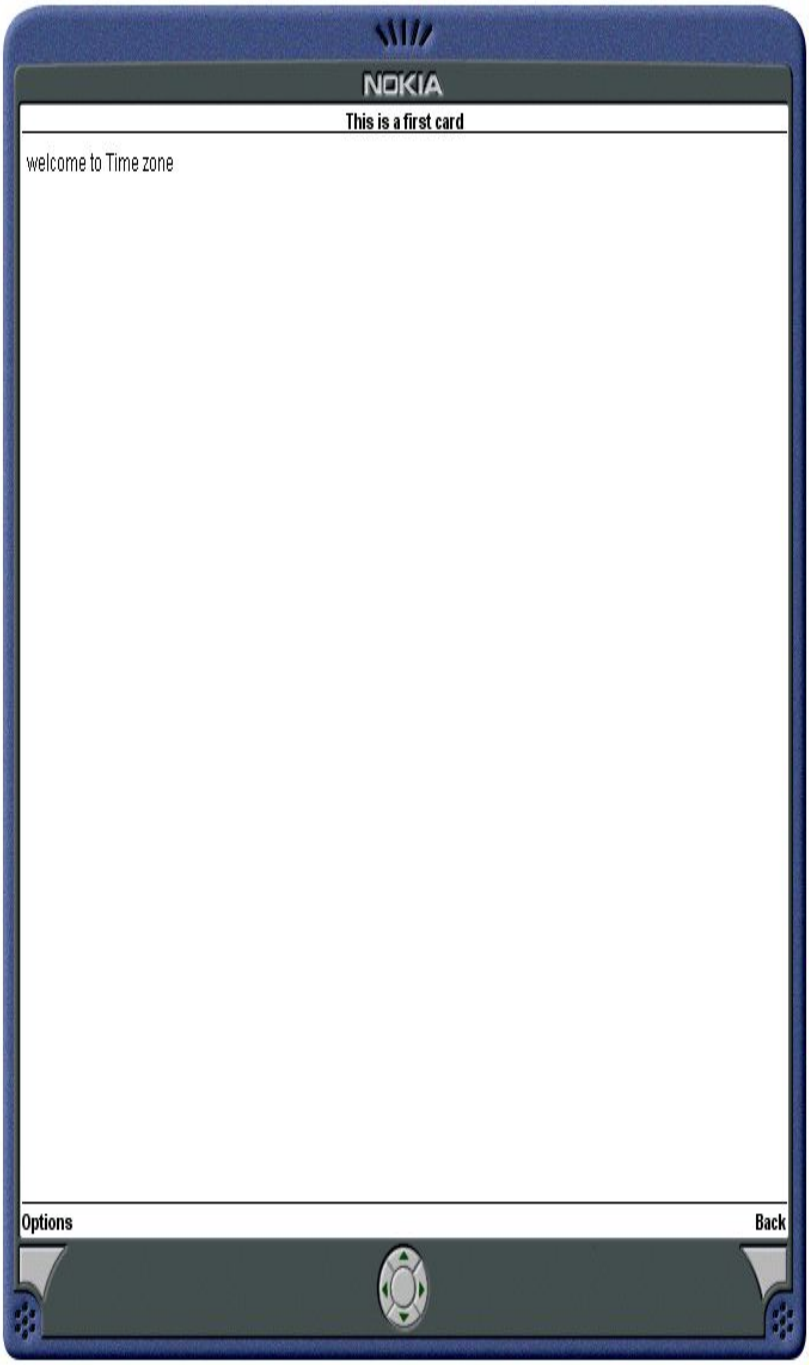
test.wml

```
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">

<!-- created by EasyPad WAPtor (http://www.waptop.net/) -->
<wml>
```

```
<card id="MainCard" title="This is a first card">

<p>welcome to Time zone</p>

</card>

</wml>
```

OUTPUT :




NOKIA
This is a first card
welcome to Time zone
Options
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EXPERIMENT-17

AIM: Write a program to create a simple calculator using wml script in wml.

CODE:

```
<?xml version="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.3//EN"
"http://www.wapforum.org/DTD/wml13.dtd">


<wml>

 <card id="card1" title="calculator">

  <p>

   <big>CALCULATOR</big><br/>


   Enter first number:<br/>

   <input name="first"/><br/>

   Enter second number:<br/>

   <input name="second"/><br/>

    result :<br/>

   <input name="result" value="$(result)" /><br/>


   <a href="calcu.wmls#add()">ADD</a><br/>

    <a href="calcu.wmls#sub()">SUBTRACTION</a><br/>

   <a href="calcu.wmls#multi()">MULTIPLY</a><br/>
```

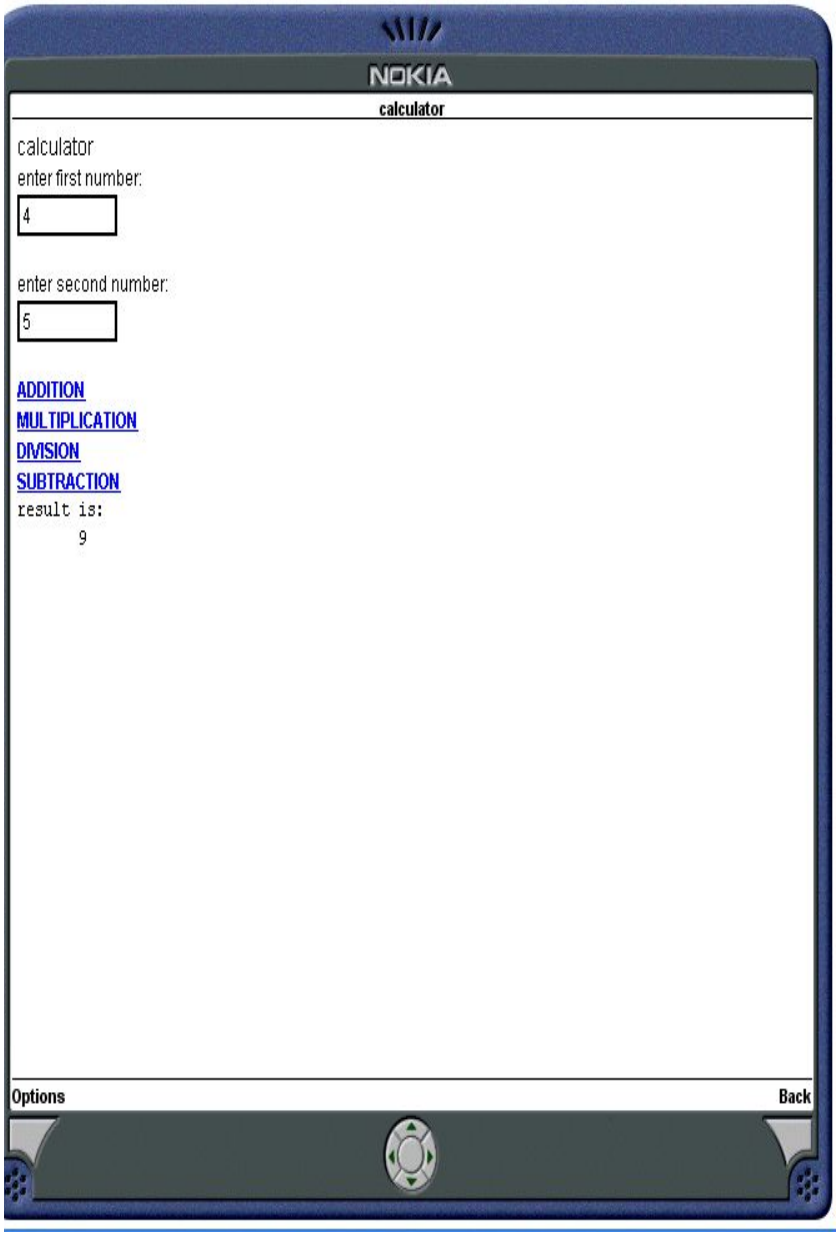
```
<a href="calcu.wmls#divi()">DIVISION</a><br/>

</p>
</card>
</wml>
```

WML Script :

```
extern function add()
{
var first= WMLBrowser.getVar("first");
var second= WMLBrowser.getVar("second");
first= Lang.parseInt(first);
second = Lang.parseInt(second);
WMLBrowser.setVar("result", first + second);
WMLBrowser.refresh();
 }

extern function sub()
{var first= WMLBrowser.getVar("first");
var second= WMLBrowser.getVar("second");
first= Lang.parseInt(first);
second = Lang.parseInt(second);
WMLBrowser.setVar("result", first - second);
WMLBrowser.refresh();
```

```
  }


extern function multi()
{
var first= WMLBrowser.getVar("first");
var second= WMLBrowser.getVar("second");
first= Lang.parseInt(first);
second = Lang.parseInt(second);
WMLBrowser.setVar("result", first * second);
WMLBrowser.refresh();
  }


extern function divi()
{
var first= WMLBrowser.getVar("first");
var second= WMLBrowser.getVar("second");
first= Lang.parseInt(first);
 second = Lang.parseInt(second);
WMLBrowser.setVar("result", first / second);
WMLBrowser.refresh();
}
```

OUTPUT :


NOKIA
calculator
calculator
enter first number:
4
enter second number:
5
ADDITION
MULTIPLICATION
DIVISION
SUBTRACTION
result is:
9
Options
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