Αρχές Γλωσσών Προγραμματισμού & Μεταφραστών Τμήμα Μηχανικών Η/Υ & Πληροφορικής Πανεπιστήμιο Πατρών Εαρινό Εξάμηνο 2023

Εργαστηριακή Άσκηση Flex-Bison

Περιεχόμενα:

Περιγραφή της γραμματικής της γλώσσας σε BNF

<Root> ::= <Comment> <padding> "<LinearLayout" <nline> <AL> <padding> ">"
<Comment> <padding> <T1> <padding> "</LinearLayout>" <Comment> |

<Comment> <padding> "<RelativeLayout" <nline> <AR> ">" <Comment> <padding>
<T1> <padding> "</RelativeLayout>" <Comment> |

<Comment> <padding> "<RelativeLayout" <nline> <AR> "/>" <Comment>

<TextView> ::= "<TextView" <nline> <AT> <padding> "/>"

<ImageView> ::= "<ImageView" <nline> <AI> <padding> "/>"

<Button> ::= "<Button" <nline> <AB> <padding> "/>"

<RadioButton> ::= "<RadioButton" <nline> <ARB> <padding> "/>"

<Buttonss> ::= <Comment> <padding> <RadioButton> <Buttonss> | <Comment>
<padding> <RadioButton> <Comment> <padding>

<RadioGroup> ::= "<RadioGroup" <nline> <ARG> <padding> ">" <Buttonss>
"</RadioGroup>"

<ProgressBar> ::= "<ProgressBar" <nline> <APB> <padding> "/>"

<T1> ::= <T2> | <T1> <T2>

<T2> ::= <root> | <comment> <padding> <radiogroup> | <comment> <padding>
<imageview> | <comment> < padding> < textview> | <comment>
<padding> <button> | <comment> <padding> <progressbar>

<Comment> ::= <padding> | <padding> T_STR <Comment>

```
<mandatory> ::= "android:layout_width=" <values> <NA>
"layout_height="<values> | "android:layout_height=" <values> <NA>
"layout_width=" <values>


<NA> ::= <nline> "android:"


<Aid> ::= <NA> "id=" ATTSTR

<Aor> ::= <NA> "orientation=" ATTSTR

<Atc> ::= <NA> "textColor=" ATTSTR

<Ap> ::= <NA> "padding=" ATTINT

<Acb> ::= <NA> "checkedButton=" ATTSTR

<Amax> ::= <NA> "max=" ATTINT

<Aprog> ::= <NA> "progress=" ATTINT



<AL> ::= <mandatory> <Aid> <Aor> | <mandatory> <Aor> <Aid> |

         <mandatory> <Aor> <padding> | <mandatory> <Aid> <padding> |

         <mandatory> <padding>


<AR> ::= <mandatory> <Aid> | <mandatory> <padding>


<AT>::= <mandatory> <NA> "text=" <ATTSTR> <Aid> <Atc> |

        <mandatory> <NA> "text=" <ATTSTR> <Aid> <padding> |

        <mandatory> <NA> "text=" <ATTSTR> <Atc> <padding> |

        <mandatory> <NA> "text=" <ATTSTR> <Atc> <Aid> |

        <mandatory> <NA> "text=" <ATTSTR> <padding> |

        <mandatory><Aid> <NA> "text=" <ATTSTR> <Atc> |

        <mandatory> <Aid> <NA> "text=" <ATTSTR> <padding> |
```

```
        <mandatory> <Atc> <NA> "text=" <ATTSTR> <Aid> |

        <mandatory> <Atc> <NA> "text=" <ATTSTR> <padding> |

        <mandatory> <Aid> <Atc> <NA> "text=" <ATTSTR> |

        <mandatory> <Atc> <Aid> <NA> "text=" <ATTSTR>


<AI> ::= <mandatory> <NA> "source=" ATTSTR <Aid> <Ap> |

        <mandatory> <NA> "source=" ATTSTR <Aid> <padding> |

        <mandatory> <NA> "source=" ATTSTR <Ap> <padding> |

        <mandatory> <NA> "source=" ATTSTR <Ap> <Aid> |

        <mandatory> <NA> "source=" ATTSTR <padding> |

        <mandatory> <Aid> <NA> "source=" ATTSTR <Ap> |

        <mandatory> <Aid> <NA> "source=" ATTSTR <padding> |

        <mandatory><Ap> <NA> "source=" ATTSTR <Aid> |

        <mandatory> <Ap> <NA> "source=" ATTSTR <padding> |

        <mandatory> <Aid> <Ap> <NA> "source=" ATTSTR |

        <mandatory> <Ap><Aid> <NA> "source=" ATTSTR


<AB> ::= <mandatory> <NA> "text=" ATTSTR <Aid> <Ap> |

        <mandatory> <NA> "text=" ATTSTR <Aid> <padding> |

        <mandatory> <NA> "text=" ATTSTR <Ap> <padding> |

        <mandatory> <NA> "text=" ATTSTR <Ap> <Aid> |

        <mandatory> <NA> "text=" ATTSTR <padding> |

        <mandatory> <Aid> <NA> "text=" ATTSTR <Ap> |

        <mandatory> <Aid> <NA> "text=" ATTSTR <padding> |

        <mandatory> <Ap> <NA> "text=" ATTSTR <Aid> |

        <mandatory> <Ap> <NA> "text=" ATTSTR <padding> |

        <mandatory> <Aid> <Ap> <NA> "text=" ATTSTR |

        <mandatory> <Ap> <Aid> <NA> "text=" ATTSTR


<ARB> ::= <mandatory> <NA> "id=" ATTSTR <NA> "text=" ATTSTR |
```

```
                  <mandatory> <NA> "text=" ATTSTR <NA> "id=" ATTSTR


ARG ::= <mandatory> <NA> "radioButtonNo=" ATTINT <Aid> <Acb> |
        <mandatory> <NA> "radioButtonNo=" ATTINT <Aid> <padding> |
        <mandatory> <NA> "radioButtonNo=" ATTINT <Acb> <padding> |
        <mandatory> <NA> "radioButtonNo=" ATTINT <Acb> <Aid> |
        <mandatory> <NA> "radioButtonNo=" ATTINT <padding> |
        <mandatory> <Aid> <NA> "radioButtonNo=" ATTINT <Acb> |
        <mandatory> <Aid> <NA> "radioButtonNo=" ATTINT <padding> |
        <mandatory> <Acb> <NA> "radioButtonNo=" ATTINT <Aid> |
        <mandatory> <Acb> <NA> "radioButtonNo=" ATTINT <padding> |
        <mandatory> <Aid> <Acb> <NA> "radioButtonNo=" ATTINT |
        <mandatory> <Acb> <Aid> <NA> "radioButtonNo=" ATTINT


<APB> ::= <mandatory> <APBComb> | <mandatory> <padding>


<APBComb> ::= <Aid> <Amax> <Aprog> | <Aid> <Amax> <padding> |
              <Aid> <Aprog> <padding> | <Amax> <Aprog> <padding> |
              <Amax> <Aid> <Aprog> | <Aid> <padding> | <Amax> <padding> |
        <Aprog> <padding> | <Amax> <Aid> <padding> |
              <Aid> <Aprog> <Amax> | <Aprog> <Amax> <padding> |
              <Amax> <Aprog> <Aid> | <Aprog> <Aid> <padding> |
              <Aprog> <Amax> <Aid> | <Aprog> <Aid> <Amax>


<values>: ATTINT | ATTSTR


<nline>: "\n" | "\n" <nline>

<padding>:  | "\n" <padding>
```

Αρχείο Flex

```
%option noyywrap



%{
#include <stdio.h>

#include <stdlib.h>

#include <string.h>


#define YY_DECL int yylex()


#include "bbison.tab.h"

int counter = 0;

int idflag = 0;

int i = 0;

char ids[10000][50];


int height_flag = 0;

int width_flag = 0;


int cb_flag = 0;

char checkbutton[50] = "";

char buttonids[10000][50];

int j = 0;

int error_cb = 0;


int progress_bar = 0;

int max_progress = -2;
```

```
int progress = -2;
int error_progress = 0;


int radionum = 0;
int radionumattr = 0;
int radionum_flag = 0;
int error_radionum = 0;


int search_id(char * c);
char * plaintxt(char * txt);


void yyerror(const char* s);


%}


%%
\t              ;
[ \n]       {(strcmp(yytext," ")?(counter++):(counter+=0)); return
T_NEWLINE;}



"<LinearLayout"         {return T_LinearLayout1;}

"</LinearLayout>" {return T_LinearLayout2;}

"<RelativeLayout" {return T_RelativeLayout1;}

"</RelativeLayout>"     {return T_RelativeLayout2;}

"<RadioGroup"           {radionum = 0; return T_RadioGroup1;}

"</RadioGroup>"         { if (radionum_flag == -1)

if (radionum!=radionumattr) {

counter = error_radionum;

yyerror("incorrect number of radiobuttons");
```

```
}
int valid = 0;
for (int k=0; k<j; k++)
if (!strcmp(checkbutton, buttonids[k]))
valid = 1;
if (valid!=1 && cb_flag==1) {
counter = error_cb;
yyerror("incorrect checkedbutton error");
}
j=0;
cb_flag=0;
return T_RadioGroup2;}


"<TextView"        {return T_TextView;}
"<ImageView"          {return T_ImageView;}
"<RadioButton"        {radionum++; return T_RadioButton;}
"<Button"         {return T_Button;}
"<ProgressBar"        {progress_bar=1; return T_ProgressBar;}


">"           {return T_EndTag1;}
"/>"          {if (progress_bar == 1) {
if(max_progress >= 0 && progress >= 0)
if (max_progress<progress) {
counter = error_progress;
yyerror("incorrect progress value error");
}
progress_bar = 0;
max_progress = -2;
progress = -2;
```

```
}


return T_EndTag2;}


"android:"          {return T_Android;}


"layout_width="   {width_flag=1; return T_Width;}
"layout_height="  {height_flag=1; return T_Height;}


"id="                   {idflag=1;return T_Id;}
"orientation="          {return T_Orientation;}
"textColor="            {return T_TextColor;}
"padding="        {return T_Padding;}
"checkedButton="  {error_cb=counter; cb_flag = 1; return T_CheckedButton;}
"max="                  {max_progress=-1; return T_Max;}
"progress="             {error_progress=counter; progress=-1; return
T_Progress;}
"text="           {return T_Text;}
"src="                  {return T_Src;}
"radioButtonNo="  {error_radionum = counter; radionum_flag = 1; return
T_Rnum;}


\"[0-9]+\"          {height_flag = 0;
width_flag = 0;
if (max_progress == -1)
max_progress = atoi(plaintxt(yytext));
if (progress == -1)
```

```
progress = atoi(plaintxt(yytext));
if (radionum_flag==1) {
radionumattr = atoi(plaintxt(yytext));
radionum_flag = -1;
}
return ATTINT;}


\"[^\"]+\"          {if (idflag==1) {
if (search_id(yytext))
yyerror("id error");
strcpy(ids[i], yytext); i++;
idflag=0;
if (cb_flag == 1) {
strcpy(buttonids[j], yytext); j++;
}
}
else if (height_flag || width_flag) {
if (strcmp(yytext,"\"wrap_content\"") && strcmp(yytext, "\"match_parent\""))
yyerror("incorrect value error");
height_flag = 0;
width_flag = 0;
}
else if (cb_flag == 1 && !strcmp(checkbutton,""))
strcpy(checkbutton, yytext);


return ATTSTR;}


"<!--"([^-]|-[^-])*"-->"       {return T_STR;}
```

```
.    { yyerror("syntax error");}



%%
int search_id(char c[]) {
if (i==0)
return 0;
for(int k=0; k<i; k++) {
if (!(strcmp(c, ids[k])))
return 1;
}
return 0;
}
char * plaintxt(char * txt) {
char * result = strtok(txt, "\"");
return result;
}
```

Αρχείο Bison

```
%{

#include <stdio.h>
#include <stdlib.h>
#include <string.h>


extern int yylex();
extern int yyparse();
extern FILE* yyin;

extern int counter;
FILE * fp;

char fname[50];

void yyerror(const char* s);
%}

%union {
    unsigned int intval;
    char* strval;
}


%token T_NEWLINE
%token T_INT ATTSTR ATTINT
```

```
%token T_STR

%token T_LinearLayout1 T_LinearLayout2 T_RelativeLayout1 T_RelativeLayout2

%token T_RadioGroup1 T_RadioGroup2

%token T_TextView T_ImageView T_RadioButton T_Button T_ProgressBar

%token T_EndTag1 T_EndTag2

%token T_Android T_Width T_Height T_Id T_Orientation T_TextColor

%token T_Padding T_CheckedButton T_Max

%token T_Progress T_Text T_Src T_Rnum




%type root


%start root


%%



root:  comment padding T_LinearLayout1 nline AL padding T_EndTag1 comment
padding T1 padding T_LinearLayout2 comment

     | comment padding T_RelativeLayout1 nline AR T_EndTag1 comment padding
T1 padding T_RelativeLayout2 comment

     | comment padding T_RelativeLayout1 nline AR T_EndTag2 comment

     ;



textview: T_TextView nline AT padding T_EndTag2 ;

imageview: T_ImageView nline AI padding T_EndTag2 ;

radiobutton: T_RadioButton nline ARB padding T_EndTag2 ;

button: T_Button nline AB padding T_EndTag2 ;
```

progressbar: T_ProgressBar nline APB padding T_EndTag2 ;

buttonss: comment padding radiobutton buttonss | comment padding radiobutton
comment padding ;

radiogroup: T_RadioGroup1 nline ARG padding T_EndTag1 buttonss T_RadioGroup2
;

T1: T2 | T1 T2 ;

T2: root | comment padding radiogroup | comment padding imageview | comment
padding textview | comment padding button | comment padding progressbar ;

comment: padding | padding T_STR comment ;

mandatory: T_Android T_Width values NA T_Height values | T_Android T_Height
values NA T_Width values ;

NA: nline T_Android ;

Aid: NA T_Id ATTSTR;

Aor: NA T_Orientation ATTSTR;

Atc: NA T_TextColor ATTSTR;

Ap: NA T_Padding ATTINT;

Acb: NA T_CheckedButton ATTSTR;

Amax: NA T_Max ATTINT;

Aprog: NA T_Progress ATTINT;

AL: mandatory Aid Aor | mandatory Aor Aid | mandatory Aor padding| mandatory Aid padding| mandatory padding;

AR: mandatory Aid | mandatory padding;

AT: mandatory NA T_Text ATTSTR Aid Atc | mandatory NA T_Text ATTSTR Aid padding | mandatory NA T_Text ATTSTR Atc padding |

   mandatory NA T_Text ATTSTR Atc Aid | mandatory NA T_Text ATTSTR padding |

   mandatory Aid NA T_Text ATTSTR Atc | mandatory Aid NA T_Text ATTSTR padding |

   mandatory Atc NA T_Text ATTSTR Aid | mandatory Atc NA T_Text ATTSTR padding |

   mandatory Aid Atc NA T_Text ATTSTR |

   mandatory Atc Aid NA T_Text ATTSTR ;

AI: mandatory NA T_Src ATTSTR Aid Ap | mandatory NA T_Src ATTSTR Aid padding | mandatory NA T_Src ATTSTR Ap padding |

   mandatory NA T_Src ATTSTR Ap Aid | mandatory NA T_Src ATTSTR padding |

   mandatory Aid NA T_Src ATTSTR Ap | mandatory Aid NA T_Src ATTSTR padding |

   mandatory Ap NA T_Src ATTSTR Aid | mandatory Ap NA T_Src ATTSTR padding |

   mandatory Aid Ap NA T_Src ATTSTR |

   mandatory Ap Aid NA T_Src ATTSTR ;

AB: mandatory NA T_Text ATTSTR Aid Ap | mandatory NA T_Text ATTSTR Aid padding | mandatory NA T_Text ATTSTR Ap padding |

   mandatory NA T_Text ATTSTR Ap Aid | mandatory NA T_Text ATTSTR padding |

   mandatory Aid NA T_Text ATTSTR Ap | mandatory Aid NA T_Text ATTSTR padding |

   mandatory Ap NA T_Text ATTSTR Aid | mandatory Ap NA T_Text ATTSTR padding |

   mandatory Aid Ap NA T_Text ATTSTR |

   mandatory Ap Aid NA T_Text ATTSTR ;

ARB: mandatory NA T_Id ATTSTR NA T_Text ATTSTR | mandatory NA T_Text ATTSTR NA T_Id ATTSTR;

ARG: mandatory NA T_Rnum ATTINT Aid Acb | mandatory NA T_Rnum ATTINT Aid padding | mandatory NA T_Rnum ATTINT Acb padding|

    mandatory NA T_Rnum ATTINT Acb Aid | mandatory NA T_Rnum ATTINT padding |

    mandatory Aid NA T_Rnum ATTINT Acb | mandatory Aid NA T_Rnum ATTINT padding |

    mandatory Acb NA T_Rnum ATTINT Aid | mandatory Acb NA T_Rnum ATTINT padding |

    mandatory Aid Acb NA T_Rnum ATTINT |

    mandatory Acb Aid NA T_Rnum ATTINT ;

APB: mandatory APBComb | mandatory padding;

APBComb: Aid Amax Aprog | Aid Amax padding | Aid Aprog padding | Amax Aprog padding |

    Amax Aid Aprog | Aid padding | Amax padding | Aprog padding | Amax Aid padding |

    Aid Aprog Amax | Aprog Amax padding |

    Amax Aprog Aid | Aprog Aid padding |

    Aprog Amax Aid |

    Aprog Aid Amax ;

values: ATTINT | ATTSTR ;

nline: T_NEWLINE | T_NEWLINE nline ;

padding: | T_NEWLINE padding ;

```c
%%

void prpr() {
      fp = fopen(fname, "r");
      char c = fgetc(fp);
      while (c != EOF) {
            printf ("%c", c);
            c = fgetc(fp);
      }
      fclose(fp);

}

int main(int argc, char *argv[]) {
      strcpy(fname, argv[1]);
      yyin = fopen (argv[1], "r");
      yyparse();

      printf("\n-------------\n");
      prpr();
      printf("\n-------------\n");
      printf("SUCCESS!!!\n");

      return 0;
}

void yyerror(const char* s) {

      //system("cls");
      printf("\n-------------\n");
```

```c
        prpr();
        printf("\n--------------");
        printf("\n%s in line %d\n\n  -->  ", s, counter+1);


        fp = fopen(fname, "r");
        char ch = fgetc(fp);
        int flag = 0;
        while (ch != EOF) {
                if (flag == counter) printf ("%c", ch);
                if (ch == '\n') flag++;
                ch = fgetc(fp);
        }
        fclose(fp);


        exit(1);
}
```

Screenshots

Ερώτημα 2a:

```
--------------
<RelativeLayout
android:layout_width="match_parent"
android:layout_height="match_parent"
android:id="id1">
<TextView
        android:layout_width="20"
        android:layout_height="20"

        android:text="Dummy text"
        android:id="id2"/>
</RelativeLayout>
--------------
SUCCESS!!!

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="match_parent"
android:layout_height="match_parent"
android:id="id1">
<TextView
        android:layout_width="20"
        android:layout_height="20"

        android:text="Dummy text"
        android:id="id1"/>
</RelativeLayout>
--------------
id error in line 10

   -->    android:id="id1"/>

zikos@elamore ~
$ |
```

Ερώτημα 2b:

```
--------------
<RelativeLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"/>

--------------
SUCCESS!!!

zikos@elamore ~
$
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="wrap"/>

--------------
incorrect value error in line 3

   -->    android:layout_height="wrap"/>

zikos@elamore ~
$ |
```

Ερώτημα 2c:

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <ImageView
        android:layout_width="10"
        android:layout_height="10"
        android:padding="10"
        android:src="source"/>
</RelativeLayout>

--------------
SUCCESS!!!

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <ImageView
        android:layout_width="10"
        android:layout_height="10"
        android:padding="-10"
        android:src="source"/>
</RelativeLayout>

--------------
syntax error in line 7

  -->    android:padding="-10"

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <ImageView
        android:layout_width="10"
        android:layout_height="10"
        android:padding="a10"
        android:src="source"/>
</RelativeLayout>

--------------
syntax error in line 7

  -->    android:padding="a10"

zikos@elamore ~
$ |
```

Ερώτημα 2d:

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <!-- Hello -->
    <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:id="RG1"
        android:checkedButton="RB1"
        android:radioButtonNo="2">
        <RadioButton
            android:layout_width="10"
            android:layout_height="10"
            android:id="RB1"
            android:text="Option 1"/>
        <RadioButton
            android:layout_width="10"
            android:layout_height="10"
            android:id="RB2"
            android:text="Option 2"/>
    </RadioGroup>
</RelativeLayout>

--------------
SUCCESS!!!

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <!-- Hello -->
    <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:id="RG1"
        android:checkedButton="RB3"
        android:radioButtonNo="2">
        <RadioButton
            android:layout_width="10"
            android:layout_height="10"
            android:id="RB1"
            android:text="Option 1"/>
        <RadioButton
            android:layout_width="10"
            android:layout_height="10"
            android:id="RB2"
            android:text="Option 2"/>
    </RadioGroup>
</RelativeLayout>

--------------
incorrect checkedbutton error in line 9

  -->    android:checkedButton="RB3"

zikos@elamore ~
$ |
```

Ερώτημα 2e:

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <ProgressBar
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:progress="123"
        android:max="124"/>
</RelativeLayout>

--------------
SUCCESS!!!

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <ProgressBar
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:progress="124"
        android:max="124"/>
</RelativeLayout>

--------------
SUCCESS!!!

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <ProgressBar
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:progress="125"
        android:max="124"/>
</RelativeLayout>

--------------
incorrect progress value error in line 7

    -->    android:progress="125"

zikos@elamore ~
$ ~
```

Ερώτημα 3a:

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:radioButtonNo="2"
        android:checkedButton="RB1"
        android:id="RG1">
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB1"
                android:text="Option 1"/>
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB2"
                android:text="Option 2"/>
        </RadioGroup>
</RelativeLayout>

--------------
SUCCESS!!!

zikos@elamore ~
$ |
```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <RadioGroup
        android:layout_width="10"
        android:layout_height="10"

        android:checkedButton="RB1"
        android:id="RG1">
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB1"
                android:text="Option 1"/>
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB2"
                android:text="Option 2"/>
        </RadioGroup>
</RelativeLayout>

--------------
syntax error in line 9

  -->      android:id="RG1"

zikos@elamore ~
$ |
```

Ερώτημα 3b :

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:radioButtonNo="two"
        android:checkedButton="RB1"
        android:id="RG1">
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB1"
                android:text="Option 1"/>
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB2"
                android:text="Option 2"/>
        </RadioGroup>
</RelativeLayout>

--------------
syntax error in line 7

    -->    android:radioButtonNo="two"

zikos@elamore ~
$ |
```

Ερώτημα 3c :

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:radioButtonNo="3"
        android:checkedButton="RB1"
        android:id="RG1">
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB1"
                android:text="Option 1"/>
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB2"
                android:text="Option 2"/>
        </RadioGroup>
</RelativeLayout>

--------------
incorrect number of radiobuttons in line 7

    -->    android:radioButtonNo="3"

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$ |
```

Άλλα παραδείγματα

Σχόλια:

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:radioButtonNo="2"
        android:checkedButton="RB1"
        android:id="RG1">
<!-- Hello --> <!-- Hello -->
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB1"
                android:text="Option 1"/>
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB2"
                android:text="Option 2"/>
        </RadioGroup>
</RelativeLayout>

--------------
SUCCESS!!!

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```

```
--------------
<RelativeLayout
android:layout_width="10"
android:layout_height="10">
        <RadioGroup
        android:layout_width="10"
        android:layout_height="10"
        android:radioButtonNo="2"
        android:checkedButton="RB1"
        android:id="RG1">
<!--Hel-lo-->
<!--Hel--lo-->
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB1"
                android:text="Option 1"/>
                <RadioButton
                android:layout_width="10"
                android:layout_height="10"
                android:id="RB2"
                android:text="Option 2"/>
        </RadioGroup>
</RelativeLayout>

--------------
syntax error in line 11

   -->   <!--Hel--lo-->

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```

Παραδοχές

1. Τα attributes τοποθετούνται με την εξής σειρά: πρώτα βάζουμε τα layout_width και layout_height με οποιαδήποτε σειρά και ύστερα ακολουθούν όλα τα υπόλοιπα attributes με οποιαδήποτε σειρά.
2. Στα attributes τα οποία είναι δηλωμένα ως συμβολοσειρές θα πρέπει να υπάρχει τουλάχιστον ένας χαρακτήρας εκτός των 0-9.