Hyrje ne Informatike
Seminar 10

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Operimi me Stringje

- String.... Jane tipe te dhenash qe permbajne nje set karakteresh
- Deklarimi
    - Str: String .
    - Nenkupton qe variabli Str eshte i tipit string. Gjatesia e stringjeve mund te jete fikse ose deri ne limitin e caktuar nga vete ky tip te dhene.
    - Gjatesia max e stringjeve arrin deri ne 255 karaktere.
    - Nqs ju deklaroni nje string pertej ketyre kufijve ath ato karaktere considerohen jo te vlefshem
- Str: String [4]
    - Nenkupton qe stringa eshte me gjatesi 4.

Operimi me Stringje

- Mund te percaktoni sejcilin karakter ne nje string
  - Prsh

```
Var Str:string;
c:char;
Begin
Str := ‘Kjo eshte nje stringe’;
C:= str[7];
Writeln (c);
Readln;
End.
```

  - Ky kode da afishoje karakterin e 7 te stringes str qe I bie te jete karakteri ‘h’

Operimi me Stringje

- Ekzistojen funksione te gatshme qe operojne mbi stringjet….
- Length()-jep gjatesine e nje stringe

```
Var  Str:string;
i:integer;
Begin
Str := ‘Kjo eshte nje stringe’;
i:= length(str);
Writeln (i);
Readln;
End.
```

  - Gjatesia e kesaj stringe eshte 21.

Operimi me Stringje

- Pos(posicioniKarakterit, neStringen)
  - Percakton pozicionin e e karakterit te caktuar ne nje string.
  - Prsh
    - Str:=‘Kjo eshte nje stringe’;
    - i:= pos(‘te’,str);

    Jep vleren 7 pase karakteri ‘te’ ndodhet ne pozicionin e 7 te stringes str.

Operimi me Stringje

- Delete(s,p,n)
- Funksioni delete fshin disa karaktere nga stringa s, duke filluar nga pozicioni p , me n njesi
- Prsh
    - Str:=‘Kjo eshte nje stringe’;
    - Delete (str, 3, 4);
  - Do afishoje ‘Kjhte nje stringe’

Operimi me Stringje

- Insert(str,s,p)
- Funksioni Insert inserton nje string str(karakter) ne stringen s, duke filluar nga pozicioni p ne s
- Prsh
    - Str:=‘Kjo eshte nje stringe’;
    - Insert (‘&$’, str, 4);
  - Do afishoje ‘Kjo&$ eshte nje stringe’

Operimi me Stringje

- Komanda Str() konverton nje integer ne stringe.
  - Prsh
    - i:= 123;
    - Str(i,s);
  - Do afishoje ‘123’
- Komanda Val() konverton nje stringe ne integer.
    - S:= ‘123’;
    - Val (s,a,er)
    - Konverton stringen s ne a dhe nqs eshte nje gabim ath er do mbaje pozicionin ne stringe se ku ndodhet ky gabim

Operimi me Stringje

- Concat(s1,s2,s3..,sn);
- Funksini concat ben lidhjen e stringjeve s1,s2,…sn ne nje te vetem.
- Prsh
    - S1:=‘kjo’;
    - S2:=‘ eshte’;
    - S3:=‘ nje stringe’;
    - Concat (s1,s2,s3);
  - Do afishoje ‘Kjo eshte nje stringe’.

Ushtrimi 1

- Te ndertohet nje program qe afishon emrin dhe mbiemrin e nje personi ne formen: mbiemer.iniciali i emrit psh. ELISA RECI ne RECI.E

- Udhezim perdorni funksionet e gatshme mbi stringjet.

Procedurat & Funksionet

- Jane sub-programe qe performojne nje task te caktume perbrenda nje programi
- Avantazhet:
  - Modularizimi : lejimi i copertimit te programeve ne copeza
  - Code re.use: mund te riperdoret ne cdo pjese te programit
  - Easy Debugging: proces me i lehte per gjetjen dhe gjurmimim e gabimeve kur ndodh modularizimi
  - error reduction: codi i riperdorur redukton procesin e rishkrimit dhe bagimet ne kode
  - Easy revision: codet e modularizuara jane me te lehte per tu rishikuar, update-uar dhe zhgjeruar sepse jte gjitha sub-programet kane nevoj te modifikohen

Function

- Perdoret per kryerjen e llogaritjeve
- Struktura :

FUNCTION <identifier> (<formal parameter list>) : <type> ;

<CONSTant definition part>; optional

<TYPE definition part>; optional

<VARiable declaration part>; optional

begin

<statement part> duhet ti jepet si vleredhenje gjithmon vlera e funksionit qe thirret

end;

Funksion - shembull

- Funksion qe percakton mesataren e 3 numrave
- Demo

```
Program mesatare;

var
x,y,z:integer;
mes:real;

Function mesatarja(a,b,c:integer):real;
 var
 shuma:integer;
 Begin
  shuma:= a+b+c;
  mesatarja:=shuma/3.0;
 end;

Begin
 writeln ('Jepni tre numrat:');
 readln (x,y,z);
 mes := mesatarja (x,y,z);
 writeln ('Mesatarja eshte : ', mes:3:2);
 readln;
 end.
```

```
Program mesatare;

var
mes:real;

Function mesatarja(a,b,c:integer):real;
 var
 shuma:integer;
 Begin
  shuma:= a+b+c;
  mesatarja:=shuma/3.0;
 end;

Begin
mes := mesatarja (2,1,3);
 writeln ('Mesatarja eshte : ', mes:3:2);
 readln;
 end.
```

Funksionet e gatshme

- Funksionet matematike :

Function	Description	Argument type	Return type
abs	absolute value	real or integer	same as argument
arctan	arctan in radians	real or integer	real
cos	cosine of a radian measure	real or integer	real
exp	e to the given power	real or integer	real
ln	natural logarithm	real or integer	real
round	round to nearest integer	real	integer
sin	sin of a radian measure	real or integer	real
sqr	square (power 2)	real or integer	same as argument
sqrt	square root (power 1/2)	real or integer	real
trunc	truncate (round down)	real or integer	integer

Funksionet Char

Function	Description
Chr	This can be used to discover the character associated with a particular ASCII value, eg: Chr (67) will return the character 'C'.
Ord	This does the opposite of Chr and is short for Ordinal. Ordinals are data that can be ordered so that it is known which value comes before or comes next, eg: before the Integer 5 is 4 and after is 6. Integers and characters are ordinal data types. Ord('C') will return the Integer value 67
Succ	This is short for successor and it will find the next value or character in an ordinal set, eg: Succ ('A') will return the character 'B'
Pred	This is short for predecessor and it finds the previous value or character symbol in an ordinal set, eg: Pred ('B') will return the character 'A'.
UpCase	This function will take a character and return the upper case version of it, eg: UpCase (Reply) will return 'Y' if Reply is set to 'y'

Function	Description	Argument type	Return type
chr	character with given ASCII value	integer	char
ord	ordinal value	integer or char	integer
pred	predecessor	integer or char	same as argument type
succ	successor	integer or char	same as argument type

Funksionet Date-Time

Function	Description
DateToStr	This function takes a date from the system and coverts it into a string so that it can be displayed, eg: DateToStr(Date) will return the date in the format dd/mm/yyyy
TimeToStr	This function takes the time from the system and coverts it into a string so that it can be displayed, eg: TimeToStr(Time) will return a time in the format hh:mm

Ushtrimi 2

- Cfare afishohet nga nje kode i tille ?

```
Program REZULTATI;
Begin
 Writeln(Chr(65));
  Writeln(Ord('A'));
  Writeln(Pred('S'));
  Writeln(Succ('B'));

  Writeln(abs(2));
  Writeln(abs(-7));
  Writeln(cos(180):2:2);
  Writeln(sin(30):2:2);
  Writeln(exp(3):3:1);
  Writeln(int(5.4):2:1);
  Writeln(ln(1):2:2);
   Readln;
End.
```

Ushtrimi 3

- Shkruani nje program qe permban nje funksion i cili lexon stringje .

Ushtrimi 4

- Ndertoni nje funksion qe llogarit siperfaqen e sferes (rrethit).

Ushtrimi 5

- Ndertoni nje funksion qe llogarit vleren me te madhe ndermjet tre numrave…