Characters and Strings

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Strings

1. Create string of length

```
character(len=50) :: mystring
mystring = "short string"
```

2. String length

String length, with / without trimming.

```
Code:

character(len=12) :: strvar
!! ...
strvar = "word"
print *,len(strvar),len(trim(strvar))
```

```
Output:
            12
      4
```

3. String concatenation

```fortran
Code:

character(len=10) ::
     firstname,lastname
character(len=15) ::
     shortname,fullname
!! ...
firstname = "Victor"; lastname =
     "Eijkhout"
shortname = firstname // lastname
print *,"without trimming: ",shortname
fullname = trim(firstname) // " " //
     trim(lastname)
print *,"with trimming: ",fullname
```

```
Output:

 without trimming:
     Victor    Eijkh
 with trimming:
     Victor Eijkhout
```

String formatting

4. Integer formatting

```
Code:

i = 56
print *,i
print '(i4)',i
print '(i2)',i
print '(i1)',i
i = i*i
print '("fit <",i0,"> ted")',i
```

```
Output:

         56
   56
56
*
fit <3136> ted
```

5. String formatting

In the format spec:

```
print '(i2,"--",i2)', m,n
```

Explicitly:

```
print '(a5,2)',somestring,someint
```

Use only the required space:

```
print '(a,i0,a)', str1,int2,str3
\end {frameblock}

\input{sl:f-format-rep}

\sectionframe{Character conversion}

\input{sl:f-to-ascii}
\input{sl:f-ascii-code}

\exerciseslide{ex:f-test-lower}

\sectionframe{String conversion}
```

6. Parse date string

```fortran
character(len=8) :: date
integer :: year,month,day
date = "20221027"
read( date,'( i4,i2,i2 )' ) &
     year,month,day
!! ...
print *,"Date:",date
print '( "Year=",i4,", mo=",i2,",
     day=",i2 )', &
     year,month,day
```

Output:

```
 Date:20221027
Year=2022, mo=10,
    day=27
```

7. Date quantities to string

```
Code:

character(len=10) :: longdate
!! ...
write( longdate,&
    '( i4,"/",i2,"/",i2 )' &
    ) year,month,day
print *,"Long date:",longdate
```

```
Output:

 Long date:2022/10/27
```