

## OPGAVE E PART 1

Opgaver forløb fint, uden de store problemer. Dog opstod der problemer omkring punkt 5, da de to filer XML og XSD ikke passede over ses. Dette kan ses af billede punkt 5.a. Grunden til at de to filer ikke passede sammen var at "communication" var ændret til "entrance" i XSD. Men efter at have rettet XML-filen til passede de to filer sammen igen.

Til sidst ved punkt 7 indsat vi en anden funktion, som i stedet for at sortere efter rumstørrelsen, sorteres i alfabetisk rækkefølge på rum typen. Funktionens opbygning fandt vi på [www.w3schools.com](http://www.w3schools.com). Resultatet af funktionen er illustreret på figur Bonus.jpg

**Validated OK!**

```

<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="ex_e.xslt"?>
<Project>
  <ProjectName>Semester 7, 2001</ProjectName>
  <Site>
    <SiteName>Harbour dwelling area, Aalborg</SiteName>
    <Building>
      <BuildingId>Building 1</BuildingId>
      <Storey>
        <StoreyLevel>level 3</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "38">
          <usage>living room</usage>
        </Space>
        <Space SpaceType = "kitchen" SpaceFloorArea = "25">
          <usage>open kitchen</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "18">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "communication" SpaceFloorArea = "18">
          <usage>entrance hall</usage>
        </Space>
        <Space SpaceType = "hygien" SpaceFloorArea = "8">
          <usage>guest toilet</usage>
        </Space>
      </Storey>
      <Storey>
        <StoreyLevel>level 2</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "60">
          <usage>home office</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "18">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "38">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "communication" SpaceFloorArea = "12">
          <usage>hall</usage>
        </Space>
        <Space SpaceType = "hygien" SpaceFloorArea = "6">
          <usage>toilet with bath</usage>
        </Space>
      </Storey>
      <Storey>
        <StoreyLevel>level 3</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "75">
          <usage>sleeping room</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "10">
          <usage>hall</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "28">
          <usage>Bathroom</usage>
        </Space>
        <Space SpaceType = "communication" SpaceFloorArea = "12">
          <usage>hall</usage>
        </Space>
        <Space SpaceType = "hygien" SpaceFloorArea = "6">
          <usage>toilet with bath</usage>
        </Space>
      </Storey>
    </Building>
  </Building>

```

**Punkt 3**

## XSD Schema Validator

Schema document:

NamespaceURI:

XML document:

### Validation error:

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="ex_e.xslt"?>
<Project>
  <ProjectName>Semester 7, 2001</ProjectName>
  <Site>
    <SiteName>Harbour dwelling area, Aalborg</SiteName>
    <Building>
      <BuildingId>Building 1</BuildingId>
      <Storey>
        <StoreyLevel>level 3</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "38">
          <usage>living room</usage>
        </Space>
        <Space SpaceType = "kitchen" SpaceFloorArea = "25">
          <usage>open kitchen</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "18">
          <usage>sleeping</usage>
        </Space>
      </Storey>
    </Site>
  </Project>
```

Error at (20,12): The 'SpaceType' attribute has an invalid value according to its data type. An error occurred at , (20, 12).

```
<Space SpaceType = "communication" SpaceFloorArea = "18">
  <usage>entrance hall</usage>
</Space>
<Space SpaceType = "hygien" SpaceFloorArea = "8">
  <usage>guest toilet</usage>
</Space>
</Storey>
<Storey>
  <StoreyLevel>level 2</StoreyLevel>
  <Space SpaceType = "room" SpaceFloorArea = "50">
    <usage>home office</usage>
  </Space>
  <Space SpaceType = "room" SpaceFloorArea = "18">
    <usage>sleeping</usage>
  </Space>
  <Space SpaceType = "room" SpaceFloorArea = "38">
    <usage>sleeping</usage>
  </Space>
</Storey>
```

Error at (38,12): The 'SpaceType' attribute has an invalid value according to its data type. An error occurred at , (38, 12).

```
<Space SpaceType = "communication" SpaceFloorArea = "12">
  <usage>hall</usage>
</Space>
<Space SpaceType = "hygien" SpaceFloorArea = "6">
  <usage>toilet with bath</usage>
</Space>
</Storey>
```

Error at (45,5): The element 'Building' has invalid content. An error occurred at , (45, 5).

```
<Storey>
  <StoreyLevel>level 3</StoreyLevel>
  <Space SpaceType = "room" SpaceFloorArea = "75">
    <usage>sleeping room</usage>
  </Space>
</Storey>
```

### Punkt 5.a

**Validated OK!**

```

<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="ex_e.xslt"?>
<Project>
  <ProjectName>Semester 7, 2001</ProjectName>
  <Site>
    <SiteName>Harbour dwelling area, Aalborg</SiteName>
    <Building>
      <BuildingId>Building 1</BuildingId>
      <Storey>
        <StoreyLevel>level 3</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "38">
          <usage>living room</usage>
        </Space>
        <Space SpaceType = "kitchen" SpaceFloorArea = "25">
          <usage>open kitchen</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "18">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "entrance" SpaceFloorArea = "18">
          <usage>entrance hall</usage>
        </Space>
        <Space SpaceType = "hygien" SpaceFloorArea = "8">
          <usage>guest toilet</usage>
        </Space>
      </Storey>
      <Storey>
        <StoreyLevel>level 2</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "60">
          <usage>home office</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "18">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "38">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "entrance" SpaceFloorArea = "12">
          <usage>hall</usage>
        </Space>
        <Space SpaceType = "hygien" SpaceFloorArea = "6">
          <usage>toilet with bath</usage>
        </Space>
      </Storey>
    </Building>
    <Building>
      <BuildingId>Building 2</BuildingId>
      <Storey>
        <StoreyLevel>level 1</StoreyLevel>
        <Space SpaceType = "room" SpaceFloorArea = "38">
          <usage>living room</usage>
        </Space>
        <Space SpaceType = "kitchen" SpaceFloorArea = "25">
          <usage>open kitchen</usage>
        </Space>
        <Space SpaceType = "room" SpaceFloorArea = "18">
          <usage>sleeping</usage>
        </Space>
        <Space SpaceType = "entrance" SpaceFloorArea = "18">
          <usage>entrance hall</usage>
        </Space>
        <Space SpaceType = "hygien" SpaceFloorArea = "8">
          <usage>guest toilet</usage>
        </Space>
      </Storey>
    </Building>
  </Site>
</Project>

```

**Punkt 5.b**

## Semester 7, 2001

*Harbour dwelling area, Aalborg*

### BUILDING 1

#### Level 3

SpaceType	SpaceFloorArea	Usage
Room	38	Living Room
Kitchen	25	Open Kitchen
Room	18	Sleeping
Entrance	18	Entrance Hall
Hygien	8	Guest Toilet

#### Level 2

SpaceType	SpaceFloorArea	Usage
Room	60	Home Office
Room	18	Sleeping
Room	38	Sleeping
Entrance	12	Hall
Hygien	6	Toilet With Bath

### BUILDING 2

#### Level 1

SpaceType	SpaceFloorArea	Usage
Room	38	Living Room
Kitchen	25	Open Kitchen
Room	18	Sleeping
Entrance	18	Entrance Hall
Hygien	8	Guest Toilet

#### Level 2

SpaceType	SpaceFloorArea	Usage
Room	60	Home Office
Room	18	Sleeping
Room	38	Sleeping
Entrance	12	Hall
Hygien	6	Toilet With Bath

**Punk 6**

## Semester 7, 2001

Harbour dwelling area, Aalborg

### BUILDING 1

#### Level 3

SpaceType	SpaceFloorArea	Usage
Room	38	Living Room
Kitchen	25	Open Kitchen
Room	18	Sleeping
Entrance	18	Entrance Hall
Hygien	8	Guest Toilet

#### Level 2

SpaceType	SpaceFloorArea	Usage
Room	60	Home Office
Room	18	Sleeping
Room	38	Sleeping
Entrance	12	Hall
Hygien	6	Toilet With Bath

### BUILDING 2

#### Level 1

SpaceType	SpaceFloorArea	Usage
Room	38	Living Room
Kitchen	25	Open Kitchen
Room	18	Sleeping
Entrance	18	Entrance Hall
Hygien	8	Guest Toilet

#### Level 2

SpaceType	SpaceFloorArea	Usage
Room	60	Home Office
Room	18	Sleeping
Room	38	Sleeping
Entrance	12	Hall
Hygien	6	Toilet With Bath

**Punkt 7**

## Semester 7, 2001

Harbour dwelling area, Aalborg

### BUILDING 1

#### Level 3

SpaceType	SpaceFloorArea	Usage
Entrance	18	Entrance Hall
Hygien	8	Guest Toilet
Kitchen	25	Open Kitchen
Room	38	Living Room
Room	18	Sleeping

#### Level 1

SpaceType	SpaceFloorArea	Usage
Room	2	Dungeon 1
Room	1	Dungeon 2
Room	1	Dungeon 3

### BUILDING 2

#### Level 1

SpaceType	SpaceFloorArea	Usage
Entrance	18	Entrance Hall
Hygien	8	Guest Toilet
Kitchen	25	Open Kitchen
Room	38	Living Room
Room	18	Sleeping

#### Level 2

SpaceType	SpaceFloorArea	Usage
Entrance	12	Hall
Hygien	6	Toilet With Bath

**Bonus**