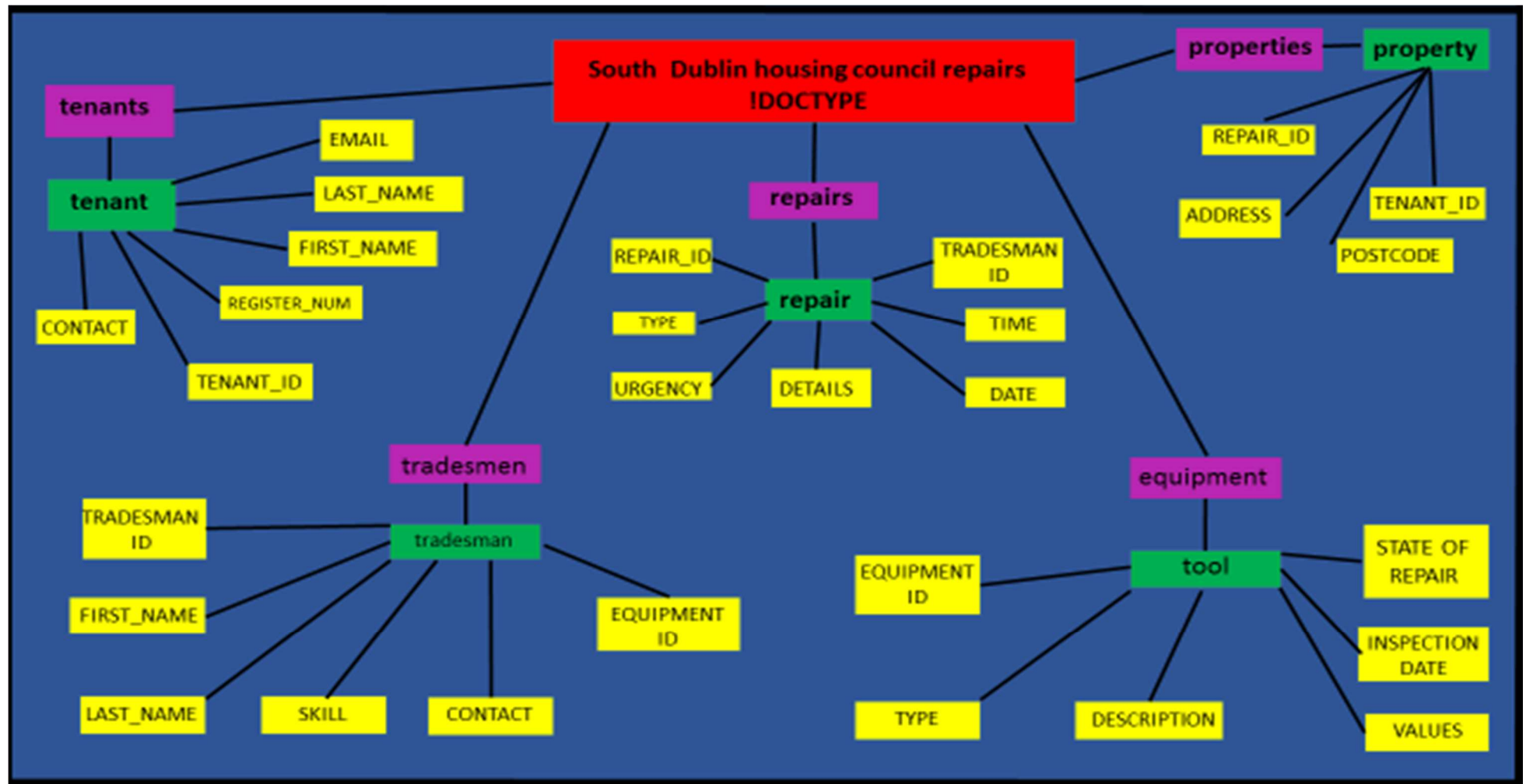# XML DESIGN OF SOUTH DUBLIN HOUSING COUNCIL REPAIRS DATABASE WHICH CONTAINS DTD AND XML FILE STRUCTURE OF THE DATABASE AND XPATH QUERIES AND ALSO CONTAINS AN XML SCHEMATIC

STUDENT NUMBER: G00172772;

STUDENT NAME: STEPHEN FAHY;

XML SCHEMATIC

South Dublin housing council repairs !DOCTYPE

properties — **property**
- REPAIR_ID
- ADDRESS
- TENANT_ID
- POSTCODE

tenants
- **tenant**
  - EMAIL
  - LAST_NAME
  - FIRST_NAME
  - REGISTER_NUM
  - CONTACT
  - TENANT_ID

repairs
- **repair**
  - REPAIR_ID
  - TYPE
  - URGENCY
  - DETAILS
  - TRADESMAN ID
  - TIME
  - DATE

tradesmen
- **tradesman**
  - TRADESMAN ID
  - FIRST_NAME
  - LAST_NAME
  - SKILL
  - CONTACT
  - EQUIPMENT ID

equipment
- **tool**
  - EQUIPMENT ID
  - TYPE
  - DESCRIPTION
  - STATE OF REPAIR
  - INSPECTION DATE
  - VALUES

DTD AND XML FILE STRUCTURE OF THE DATABASE AND XPATH QUERIES

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

<!--
```

XPATH QUERY 1

doc("south_dublin_housing_council_repairsQ.xml") /south_dublin_housing_council_repairs/tenants/tenant/FIRST_NAME;

XPATH QUERY 2

doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/ tenants/tenant/(FIRST_NAME|LAST_NAME);

XPATH QUERY 3

doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/*/LAST_NAME ;

XPATH QUERY 4

doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/repairs/*/repair;

XPATH QUERY 5

doc("south_dublin_housing_council_repairsQ.xml")south_dublin_housing_council_repairs/equipment/tool[@VALUE < 20.00];

XPATH QUERY 6

 doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/equipment/tool[@VALUE >20.00];

XPATH QUERY 7

 doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/property[DUBLIN 4]/ADDRESS;

XPATH QUERY 8

 doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/equipment[@VALUE < 20.00 AND STATE_OF_REPAIR ="Excellent"]/tool;

XPATH QUERY 9

 doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/tradesmen[SKILL ="Carpenter" and FIRST_NAME = "Larry"]/tradesman;

XPATH QUERY 10

 doc("south_dublin_housing_council_repairsQ.xml")/south_dublin_housing_council_repairs/equipment[TYPE="saw"]/tool;

-->

```dtd
<!DOCTYPE south_dublin_housing_council_repairs[

    <!ELEMENT south_dublin_housing_council_repairs((tenants, properties, repairs, tradesmen, equipment)+)>

        <!ELEMENT tenants (tenant)>

            <!ELEMENT tenant (TENANT_ID, REGISTER_NUMBER, FIRST_NAME, LAST_NAME, CONTACT, EMAIL)>

                <!ELEMENT TENANT_ID (#PCDATA)>

                <!ELEMENT REGISTER_NUMBER (#PCDATA)>

                <!ELEMENT FIRST_NAME (#PCDATA)>

                <!ELEMENT LAST_NAME (#PCDATA)>

                <!ELEMENT CONTACT (#PCDATA)>

                <!ELEMENT EMAIL (#PCDATA)>


        <!ELEMENT properties (property)>

            <!ELEMENT property (POSTCODE, TENANT_ID, ADDRESS, REPAIR_ID)>

                <!ELEMENT POSTCODE (#PCDATA)>
                <!ELEMENT TENANT_ID (#PCDATA)>
                <!ELEMENT ADDRESS (#PCDATA)>
                <!ELEMENT REPAIR_ID (#PCDATA)>
```

```
<!ELEMENT repairs (repair)>

        <!ELEMENT repair (REPAIR_ID, TYPE, URGENCY, DETAILS, DATE, TIME, TRADESMAN_ID)>
                <!ELEMENT REPAIR_ID (#PCDATA)>
                <!ELEMENT TYPE (#PCDATA)>
                <!ELEMENT URGENCY (#PCDATA)>
                <!ELEMENT DETAILS (#PCDATA)>
                <!ELEMENT DATE (#PCDATA)>
                <!ELEMENT TIME (#PCDATA)>
                <!ELEMENT TRADESMAN_ID (#PCDATA)>

<!ELEMENT tradesmen (tradesman)>

        <!ELEMENT tradesman (TRADESMAN_ID, FIRST_NAME, LAST_NAME, SKILL, CONTACT,EQUIPMENT_ID)>

                <!ELEMENT TRADESMAN_ID (#PCDATA)>

                <!ELEMENT FIRST_NAME (#PCDATA)>

                <!ELEMENT LAST_NAME (#PCDATA)>

                <!ELEMENT SKILL (#PCDATA)>

                <!ELEMENT CONTACT (#PCDATA)>

                <!ELEMENT EQUIPMENT_ID (#PCDATA)>


<!ELEMENT equipment (tool)>

        <!ELEMENT tool (EQUIPMENT_ID, TYPE, DESCRIPTION, VALUE, INSPECTION_DATE, STATE_OF_REPAIR)>

                <!ELEMENT EQUIPMENT_ID (#PCDATA)>
                <!ELEMENT TYPE (#PCDATA)>
                <!ELEMENT DESCRIPTION (#PCDATA)>
                <!ELEMENT VALUE (#PCDATA)>
```

```
                              <!ELEMENT INSPECTION_DATE (#PCDATA)>
                              <!ELEMENT STATE_OF_REPAIR (#PCDATA)>


]>



<south_dublin_housing_council_repairs>

                    <tenants>

                         <tenant>

                              <TENANT_ID>10</TENANT_ID>
                              <REGISTER_NUMBER>9959595</REGISTER_NUMBER>
                              <FIRST_NAME>Lawrence</FIRST_NAME>
                              <LAST_NAME>Mullen</LAST_NAME>
                              <CONTACT>0879375639</CONTACT>
                               <EMAIL>arcobat@eircom.ie</EMAIL>
                         </tenant>



                         <tenant>

                              <TENANT_ID>5</TENANT_ID>
                              <REGISTER_NUMBER>42893</REGISTER_NUMBER>
                              <FIRST_NAME>Tom</FIRST_NAME>
                              <LAST_NAME>O Gara</LAST_NAME>
                              <CONTACT>08767672841</CONTACT>
                              <EMAIL>soundman@hotmail.com</EMAIL>

                         </tenant>
```

```xml
<tenant>
        <TENANT_ID>16</TENANT_ID>
        <REGISTER_NUMBER>2796314</REGISTER_NUMBER>
        <FIRST_NAME>Imelda</FIRST_NAME>
        <LAST_NAME>May</LAST_NAME>
        <CONTACT>08735635473</CONTACT>
        <EMAIL>lovetattoo@eircom.ie</EMAIL>
</tenant>


<tenant>
        <TENANT_ID>21</TENANT_ID>
        <REGISTER_NUMBER>8936569</REGISTER_NUMBER>
        <FIRST_NAME>Nadine</FIRST_NAME>
        <LAST_NAME>Burke</LAST_NAME>
        <CONTACT>085456846589</CONTACT>
        <EMAIL>bioshock2004@gmail.com</EMAIL>
</tenant>


<tenant>
        <TENANT_ID>12</TENANT_ID>
        <REGISTER_NUMBER>214748364</REGISTER_NUMBER>
        <FIRST_NAME>Mary</FIRST_NAME>
        <LAST_NAME>Murray</LAST_NAME>
        <CONTACT>0895487325</CONTACT>
        <EMAIL>murray1975@gmail.com</EMAIL>
</tenant>
```

```xml
        </tenants>


    <properties>
            <property>

                    <POSTCODE>A97 NX65</POSTCODE>
                    <TENANT_ID>10</TENANT_ID>
                    <ADDRESS>Elsinore, 15 Colimore Road, Dalkey, County Dublin</ADDRESS>
                    <REPAIR_ID>10</REPAIR_ID>
            </property>


            <property>

                    <POSTCODE>D04 KN85</POSTCODE>
                    <TENANT_ID>5</TENANT_ID>
                    <ADDRESS>54 Sandymount Avenue, Dublin 4</ADDRESS>
                    <REPAIR_ID>3</REPAIR_ID>

            </property>


            <property>

                    <POSTCODE>D04 N824</POSTCODE>
                    < TENANT_ID>16</TENANT_ID>
                    <ADDRESS>The South Dock, 18 Bridge Street, Dublin 4 </ADDRESS>
                     <REPAIR_ID>7</REPAIR_ID>
            </property>
```

```xml
			<property>

					<POSTCODE>D24 WN33</POSTCODE>
					<TENANT_ID>21</TENANT_ID>
					<ADDRESS>32 Maplewood Close Dublin 24 </ADDRESS>
					<REPAIR_ID>8</REPAIR_ID>

			</property>


			<property>

					<POSTCODE>D12 A2B9</POSTCODE>
					<TENANT_ID>12</TENANT_ID>
					<ADDRESS>75 Rutland Grove, Dublin 12 </ADDRESS>
					<REPAIR_ID>6</REPAIR_ID>
			</property>
	</properties>


		<repairs>

			<repair>

					<REPAIR_ID>10</REPAIR_ID>
					<TYPE>Tiling</TYPE>
					<URGENCY>Routine</URGENCY>
					<DETAILS>putting tiles on the kitchen floor</DETAILS>
					<DATE>2016-03-01</DATE>
					<TIME>13.00</TIME>
					<TRADESMAN_ID>2</TRADESMAN_ID>

			</repair>
```

```xml
    <repair>

             <REPAIR_ID>3</REPAIR_ID>
              <TYPE>Plastering</TYPE>
              <URGENCY>Cyclical</URGENCY>
              <DETAILS>Repairs to internal walls</DETAILS>
              <DATE>2015-02-01</DATE>
               <TIME>11.00</TIME>
               <TRADESMAN_ID>5</TRADESMAN_ID>

    </repair>


    <repair>

             <REPAIR_ID>7</REPAIR_ID>

              <TYPE>Painting</TYPE>
             <URGENCY>Cyclical</URGENCY>
             <DETAILS>Painting of the outside wall of house</DETAILS>
              <DATE>2016-10-15</DATE>
             <TIME>10.00</TIME>
              <TRADESMAN_ID>8</TRADESMAN_ID>
    </repair>


     <repair>

             <REPAIR_ID>8</REPAIR_ID>

             <TYPE>Carpentry</TYPE>

             <URGENCY>Cyclical</URGENCY>
             <DETAILS>Construction of wooden fence in front garden</DETAILS>
```

```xml
                    <DATE>2016-06-05</DATE>
                    <TIME>10.30</TIME>
                    <TRADESMAN_ID>9</TRADESMAN_ID>

        </repair>


         <repair>

                 <REPAIR_ID>6</REPAIR_ID>
                 <TYPE>Woodwork</TYPE>
                 <URGENCY>Cyclical</URGENCY>
                 <DETAILS>Replace damp skirting board</DETAILS>
                  <DATE>2015-12-14</DATE>
                  <TIME>11.00</TIME>
                  <TRADESMAN_ID>7</TRADESMAN_ID>
            </repair>
</repairs>


<tradesmen>

            <tradesman>

                     <TRADESMAN_ID>2</TRADESMAN_ID>
                      <FIRST_NAME>Ray</FIRST_NAME>
                      <LAST_NAME>Dunphy</LAST_NAME>
                       <SKILL>Tiler<SKILL>
                       <CONTACT>0852878541</CONTACT>
                       <EQUIPMENT_ID>3</EQUIPMENT_ID>

             </tradesman>
```

```xml
<tradesman>
    <TRADESMAN_ID>5</TRADESMAN_ID>
    <FIRST_NAME>Henry</FIRST_NAME>
    <LAST_NAME>Dunne</LAST_NAME>
    <SKILL>Plasterer<SKILL>
    <CONTACT>0877362952</CONTACT>
    <EQUIPMENT_ID>2</EQUIPMENT_ID>
</tradesman>


<tradesman>
    <TRADESMAN_ID>8</TRADESMAN_ID>
    <FIRST_NAME>Gregory</FIRST_NAME>
    <LAST_NAME>Issaacs</LAST_NAME>
    <SKILL>Painter<SKILL>
    <CONTACT>0878954217</CONTACT>
    <EQUIPMENT_ID>6</EQUIPMENT_ID>
</tradesman>


<tradesman>
    <TRADESMAN_ID>9</TRADESMAN_ID>
    <FIRST_NAME>Larry</FIRST_NAME>
    <LAST_NAME>Quinn</LAST_NAME>
    <SKILL>Carpenter<SKILL>
    <CONTACT>085842846</CONTACT>
    <EQUIPMENT_ID>15</EQUIPMENT_ID>
</tradesman>
```

```xml
            <tradesman>

                <TRADESMAN_ID>7</TRADESMAN_ID>
                <FIRST_NAME>Stephen</FIRST_NAME>
                <LAST_NAME>Holt</LAST_NAME>
                <SKILL>Carpenter<SKILL>
                <CONTACT>0898362534</CONTACT>
                <EQUIPMENT_ID>14</EQUIPMENT_ID>

        </tradesman>

    </tradesmen>


    <equipment>

            <tool>

                <EQUIPMENT_ID>3</EQUIPMENT_ID>
                <TYPE>Angle Grinder</TYPE>
                <DESCRIPTION>Makita GA4530KD 720W</DESCRIPTION>
                <VALUE>52.00</VALUE>
                <INSPECTION_DATE>2015-10-12</INSPECTION_DATE>
                <STATE_OF_REPAIR>Poor</STATE_OF_REPAIR>
        </tool>

            <tool>

                <EQUIPMENT_ID>2</EQUIPMENT_ID>
                <TYPE>Adjustable wrench</TYPE>
                <DESCRIPTION>Stanley 300mm MaxSteel</DESCRIPTION>
                <VALUE>14.00</VALUE>
                <INSPECTION_DATE>2015-10-08</INSPECTION_DATE>
```

```xml
        <STATE_OF_REPAIR>Excellent</STATE_OF_REPAIR>

    </tool>


    <tool>

        <EQUIPMENT_ID>6</EQUIPMENT_ID>
        <TYPE>Paint Brush and roll</TYPE>
        <DESCRIPTION>Stanley 8 piece decorating set</DESCRIPTION>
        <VALUE>25.95</VALUE>
        <INSPECTION_DATE>2015-12-14</INSPECTION_DATE>
        <STATE_OF_REPAIR>Excellent</STATE_OF_REPAIR>

    </tool>


    <tool>

        <EQUIPMENT_ID>15</EQUIPMENT_ID>
        <TYPE>Heavy Duty Electric Saw</TYPE>
        <DESCRIPTION>10-1/4" Milwaukee Circular Saw</DESCRIPTION>
        <VALUE>30.95</VALUE>
        <INSPECTION_DATE>2015-12-05</INSPECTION_DATE>
        <STATE_OF_REPAIR>Excellent</STATE_OF_REPAIR>

    </tool>


    <tool>

        <EQUIPMENT_ID>14</EQUIPMENT_ID>
```

```xml
        <TYPE>Saw</TYPE>
        <DESCRIPTION>Stanley Heavy Duty 30 inch saw</DESCRIPTION>
        <VALUE>15.50</VALUE>
        <INSPECTION_DATE>2015-11-29</INSPECTION_DATE>
        <STATE_OF_REPAIR>Excellent</STATE_OF_REPAIR>

      </tool>

    </equipment>

  </south_dublin_housing_council_repairs>
```