```
using System;
    using System.Collections.Generic;
     using System.Ling;
    using System.Text;
    using System.Threading.Tasks;
 6
    using FileHelpers;
 7
    using System.Data.Odbc;
 8
    using System.Xml;
9
    using System.Xml.Linq;
10
11
    namespace Avatar Solutions
12
13
14
         public class AvatarConnection
15
16
             public IEnumerable<XElement> Rules;
17
18
             public IEnumerable<XElement> currentRule;
19
             public string CurrentRuleTitle;
20
             public string BillableCode;
21
             public List<string> Componets;
22
             public List<string> ServiceExclude;
23
             public List<string> FSExclude;
24
             public List<string> FSInclude;
25
             public List<string> ProgramExclude;
26
             public List<string> ProgramInclude;
27
             public int ReqFTF;
28
             public int ReqTot;
29
             public List<ServiceRecord> ServList { get; set; }
30
             public bool OverrideStaff {get; set; }
31
             public string OverrideStaffID { get; set; }
32
             public ServiceRecord.ServiceType currentServiceType { get; set; }
33
34
             OdbcConnectionStringBuilder connBuilder;
35
            public OdbcConnection conn { get; set; }
36
            public bool opened { get; private set; }
37
             public string uname;
38
39
             public List<BillableProvider> staffList;
40
             public List<PractitionerRecord> staffPracGuarNumb;
41
42
             [DelimitedRecord("\t")]
43
             public class PractitionerRecord
44
45
                 public string Practitioner { get; set; }
46
                 public string GuarantorID { get; set; }
47
                 public string Program { get; set; }
48
                 public string EffectiveDate { get; set; }
49
                 public string ExpirationDate { get; set; }
50
                 public string NPINumber { get; set; }
51
                 public string TaxonomyCode { get; set; }
52
                 public string SecondaryIdentificationQualifier { get; set; }
53
                 public string SecondaryIdentificationNumber { get; set; }
54
                 public string SupervisingPractitioner { get; set; }
55
                 public string ReferenceIdentificationQualifier 837P2010ABREF01 { get; set; }
56
                 public string PaytoProviderAdditionalIdentifier 837P2010ABREF02 { get; set; }
57
                 public string ClaimNoteReferenceCode 837P2300NTE01 { get; set; }
58
                 public string ClaimNoteText 837P2300NTE02 { get; set; }
59
                 public string ServiceFacilityNameLastorOrganizationName 837P2310D2420CNM103
                 { get; set; }
60
                 public string
                 ServiceFacilityIdentificationCodeQualifier 837P2310D2420CNM108 { get; set; }
                 public string ServiceFacilityIdentificationCode 837P2310D2420CNM109 { get;
61
62
                 public string ServiceFacilityAddressInformation 837P2310D2420CN301 { get;
                 set; }
63
                 public string ServiceFacilityZipCode 837P2310D2420CN403 { get; set; }
                 public string ServiceFacilityCity 837P2310D2420CN401 { get; set; }
64
65
                 public string ServiceFacilityState 837P2310D2420CN402 { get; set; }
```

```
66
                  public string
                  ServiceFacilityReferenceIdentificationQualifier 837P2310D2420CREF01 { get;
 67
                  public string ServiceFacilityReferenceIdentification 837P2310D2420CREF02 {
                  get; set; }
 68
                  public string ServiceNoteReferenceCode 837P2400NTE01 { get; set; }
 69
                  public string ServiceNoteText 837P2400NTE02 { get; set; }
 70
                  public string ClaimNoteReferenceCode 837I2300NTE01 { get; set; }
 71
                  public string ClaimNoteText 837I2300NTE02 { get; set; }
 72
                  public string BillingNoteReferenceCode 837I2300NTE01 { get; set; }
 73
                  public string BillingNoteText 837I2300NTE02 { get; set; }
 74
                  public string ClaimNoteReferenceCode 837D2300NTE01 { get; set; }
 7.5
                  public string ClaimNoteText 837D2300NTE02 { get; set; }
 76
                  public string ServiceNoteReferenceCode 837D2400NTE01 { get; set; }
 77
                  public string ServiceNoteText 837D2400NTE02 { get; set; }
 78
                  public string
                  PractitionerSecondaryIdentificationQualifier2 837ElectronicBilling { get;
                  set; }
 79
                  public string PractitionerSecondaryIdentifier2 837ElectronicBilling { get;
 80
                  public string ReferenceIdentificationQualifier 837I2330DREF01 { get; set; }
 81
                  public string ReferenceIdentification 837I2330DREF02 { get; set; }
 82
                  public string
                  PractitionerBillingQualifierOther FormLocator17a HCFA1500NPIVersionOnly {
                  get; set; }
 83
                  public string
                  PractitionerBillingOther FormLocator17a HCFA1500NPIVersionOnly { get; set; }
                  public string PractitionerBillingNPI FormLocator17b HCFA1500NPIVersionOnly
                  { get; set; }
 85
                  public string SupplementalInformation FormLocator24D HCFA1500NPIVersionOnly
                  { get; set; }
 86
                  public string PractitionerBillingNPI FormLocator24J HCFA1500NPIVersionOnly
                  { get; set; }
 87
                  public string AdditionalProviderID ADAFormLocator58 { get; set; }
 88
                  public string
                  PractitionerBillingQualifierOther FormLocator33B HCFA1500NPIVersionOnly {
                  get; set; }
                  public string
 89
                  PractitionerBillingOther FormLocator33B HCFA1500NPIVersionOnly { get; set; }
 90
                  public string Comments { get; set; }
 91
 92
                  public PractitionerRecord()
 93
                  -{
 94
 95
                  }
 96
              }
 97
 98
 99
100
101
              public class BillableProvider
102
103
                  public string name { get; set;}
104
                  public string ID { get; set; }
105
                  public string Taxonomy { get; set; }
106
                  public string npi { get; set; }
107
108
                  public BillableProvider(string n, string id, string tax, string np)
109
                  {
110
                      name = n;
111
                      ID = id;
112
                      Taxonomy = tax;
113
                      npi = np;
114
                  }
115
116
                  public BillableProvider()
117
118
119
                  }
```

```
121
122
              }
123
124
125
126
127
              internal AvatarConnection (string SYSTEMCODE, string Username, string Pasword)
128
129
                  uname = Username;
130
                  connBuilder = new OdbcConnectionStringBuilder();
131
                  connBuilder.Driver = "InterSystems ODBC";
                  connBuilder.Add("SERVER", "127.0.0.1");
132
                  connBuilder.Add("PORT", "4972");
133
                  connBuilder.Add("DATABASE", "AVPM");
134
                  connBuilder.Add("UID", SYSTEMCODE + ":" + Username);
135
                  connBuilder.Add("PWD", Pasword);
136
137
138
                // System.Windows.Forms.MessageBox.Show(connBuilder.ConnectionString);
139
140
                  try
141
                   {
142
                      conn = new OdbcConnection(connBuilder.ConnectionString);
143
                      conn.Open();
144
                      // System.Windows.Forms.MessageBox.Show("Connection Opened!");
145
                      conn.Close();
146
                      opened = true;
147
148
                      Componets = new List<string>();
149
                      ServiceExclude = new List<string>();
150
                      FSExclude = new List<string>();
151
                      FSInclude = new List<string>();
152
                      ProgramExclude = new List<string>();
153
                      ProgramInclude = new List<string>();
154
                      //StaffPrac
155
                      ServList = new List<ServiceRecord>();
156
                      staffList = new List<BillableProvider>();
157
                       staffPracGuarNumb = new List<PractitionerRecord>();
158
159
160
                  } catch (Exception e)
161
162
                      System.Windows.Forms.MessageBox.Show("Connection Failed, " +
                      Environment.NewLine + "if Avatar is opened and System Code is correct,"
                      + Environment.NewLine + "please correct login information.");
163
                       //throw e;
164
                  }
165
166
167
                  //OdbcCommand cmd = con.CreateCommand();
168
169
                  //cmd.CommandText = "SELECT Facility from table facility defaults";
170
171
              }
172
173
              public void GetStaff()
174
175
                  string stm = "select staffid, name, npi number, taxonomy code FROM
                  SYSTEM.staff current demographics";
176
177
                  using (OdbcCommand cmd = new OdbcCommand(stm, conn))
178
179
                      using (OdbcDataReader rdr = cmd.ExecuteReader())
180
                       {
181
                           while (rdr.Read())
182
                           {
183
                               this.staffList.Add(new BillableProvider
184
185
                                   ID = rdr["staffid"].ToString(),
```

120

```
186
                                   name = rdr["name"].ToString(),
187
                                   npi = rdr["npi number"].ToString(),
188
                                   Taxonomy = rdr["taxonomy code"].ToString()
189
                               });
190
                          }
191
192
193
194
195
196
                      }
197
                  }
198
              }
199
200
              public decimal GetTotalPracNumber()
201
202
                  string stm = "select count(*) as total from SYSTEM.table prac num quar proq";
203
                  decimal total;
204
                  using (OdbcCommand cmd = new OdbcCommand(stm, conn))
205
206
207
                      using (OdbcDataReader rdr = cmd.ExecuteReader())
208
209
210
                          rdr.Read();
211
                          total = decimal.Parse(rdr["total"].ToString());
212
                      }
213
                  }
214
215
                  return total;
216
              }
217
218
              public void GetPracNumbersRecords()
219
              {
220
                  string stm = "SELECT claim note text 837d, claim note ref 837d code,
                  bill note text 837i, bill note ref 837i code, svc fac name 837p, STAFF ID,
                  GUARANTOR ID, program code, effective date, expiration date, npi number,
                  taxonomy code, second ident2 qual code, second ident2 number,
                  supervising_pract_id, ref_id_qua_837p_code, ref_id_837p,
                  claim note ref 837p code, claim note text 837p, svc fac id qua code 837p,
                  svc fac address 837p, svc fac zip 837p, svc fac city 837p,
                  svc fac state 837p, svc fac ref id code 837p, svc fac ref id 837p,
                  svc note ref 837p code, svc note text 837p, claim note ref 837i code,
                  claim note text 837i, svc note ref 837d code, svc note text 837d,
                  second ident2 qual code, second ident2 number, ref id qua 837i code,
                  ref id 837i, hcfa npi 17a qua code, hcfa npi 17a, hcfa npi 17b,
                  hcfa npi loc 24d supp, hcfa npi loc 33a npi, add prov id dental f158,
                  hcfa npi loc 33b code, hcfa npi loc 33b other, comments from
                  SYSTEM.table prac num guar prog";
221
222
                  using (OdbcCommand cmd = new OdbcCommand(stm, conn))
223
224
                      using (OdbcDataReader rdr = cmd.ExecuteReader())
225
                      {
226
                          while (rdr.Read())
227
228
                               this.staffPracGuarNumb.Add(new PractitionerRecord
229
230
                                   Practitioner = rdr["STAFF ID"].ToString(),
231
                                   GuarantorID = rdr["GUARANTOR_ID"].ToString(),
232
                                   Program = rdr["program code"].ToString(),
233
                                   EffectiveDate = rdr["effective date"].ToString(),
234
                                   ExpirationDate = rdr["expiration date"].ToString(),
235
                                   NPINumber = rdr["npi number"].ToString(),
236
                                   TaxonomyCode = rdr["taxonomy code"].ToString(),
237
                                   SecondaryIdentificationQualifier =
                                   rdr["second ident2 qual code"].ToString(),
238
                                   SecondaryIdentificationNumber =
                                   rdr["second ident2 number"].ToString(),
```

```
239
240
                                  SupervisingPractitioner =
                                  rdr["supervising pract id"].ToString(),
241
242
                                  ReferenceIdentificationQualifier 837P2010ABREF01 =
                                  rdr["ref id qua 837p code"].ToString(),
243
                                  PaytoProviderAdditionalIdentifier 837P2010ABREF02 =
244
                                  rdr["ref id 837p"].ToString(),
245
                                  ClaimNoteReferenceCode 837P2300NTE01 =
246
                                  rdr["claim note ref 837p code"].ToString(),
2.47
                                  ClaimNoteText 837P2300NTE02 =
248
                                  rdr["claim note text 837p"]. ToString(),
249
250
                                  ServiceFacilityNameLastorOrganizationName 837P2310D2420CNM103
                                   = rdr["svc fac name 837p"].ToString(),
251
                                  ServiceFacilityIdentificationCodeQualifier 837P2310D2420CNM10
                                  8 = rdr["svc fac ref id code 837p"].ToString(),
252
253
                                  ServiceFacilityIdentificationCode 837P2310D2420CNM109 =
                                  rdr["svc fac ref id 837p"].ToString(),
254
255
                                  ServiceFacilityAddressInformation 837P2310D2420CN301 =
                                  rdr["svc fac address 837p"].ToString(),
256
                                  ServiceFacilityZipCode 837P2310D2420CN403 =
257
                                  rdr["svc fac zip 837p"].ToString(),
258
259
                                  ServiceFacilityCity 837P2310D2420CN401 =
                                  rdr["svc fac city 837p"].ToString(),
260
261
                                  ServiceFacilityState 837P2310D2420CN402 =
                                  rdr["svc fac state 837p"].ToString(),
262
263
                                  ServiceFacilityReferenceIdentificationQualifier 837P2310D2420
                                  CREF01 = rdr["svc fac ref id code 837p"].ToString(),
264
                                  ServiceFacilityReferenceIdentification 837P2310D2420CREF02
                                  = rdr["svc fac ref id code 837p"].ToString(),
265
                                  ServiceNoteReferenceCode 837P2400NTE01 =
                                  rdr["svc note ref 837p code"].ToString(),
266
267
                                  ServiceNoteText 837P2400NTE02 =
                                  rdr["svc note text 837p"].ToString(),
268
                                  ClaimNoteReferenceCode_837I2300NTE01 =
269
                                  rdr["claim note ref 837i code"].ToString(),
270
                                  ClaimNoteText 837I2300NTE02 =
271
                                  rdr["claim note text 837i"].ToString(),
272
273
                                  BillingNoteReferenceCode 837I2300NTE01 =
                                  rdr["bill note ref 837i code"].ToString(),
274
                                  BillingNoteText 837I2300NTE02 =
275
                                  rdr["bill note text 837i"].ToString(),
276
      ClaimNoteReferenceCode 837D2300NTE01 = rdr["claim note ref 837d code"].ToString(),
277
278
                                  ClaimNoteText 837D2300NTE02 =
                                  rdr["claim note text 837d"].ToString(),
279
280
                                  ServiceNoteReferenceCode 837D2400NTE01 =
                                  rdr["svc_note_ref_837d_code"].ToString(),
281
                                  ServiceNoteText 837D2400NTE02 =
282
```

```
283
284
                                   PractitionerSecondaryIdentificationQualifier2 837ElectronicBi
                                   lling = rdr["second ident2 qual code"].ToString(),
285
286
                                   PractitionerSecondaryIdentifier2 837ElectronicBilling =
                                   rdr["second ident2 number"].ToString(),
287
                                   ReferenceIdentificationQualifier 837I2330DREF01 =
288
                                   rdr["ref id qua 837i code"].ToString(),
289
                                   ReferenceIdentification 837I2330DREF02 =
290
                                   rdr["ref id 837i"].ToString(),
291
292
                                   PractitionerBillingQualifierOther FormLocator17a HCFA1500NPIV
                                   ersionOnly = rdr["hcfa npi 17a qua code"].ToString(),
293
294
                                   PractitionerBillingOther FormLocator17a HCFA1500NPIVersionOnl
                                   y = rdr["hcfa npi 17a"].ToString(),
295
296
                                   PractitionerBillingNPI FormLocator17b HCFA1500NPIVersionOnly
                                   = rdr["hcfa npi 17b"]. ToString(),
297
298
                                   SupplementalInformation FormLocator24D HCFA1500NPIVersionOnly
                                    = rdr["hcfa npi loc 24d supp"].ToString(),
299
300
                                   PractitionerBillingNPI FormLocator24J HCFA1500NPIVersionOnly
                                   = rdr["hcfa npi loc 33a npi"].ToString(),
301
302
                                   AdditionalProviderID ADAFormLocator58 =
                                   rdr["add prov id dental f158"].ToString(),
303
304
                                   PractitionerBillingQualifierOther FormLocator33B HCFA1500NPIV
                                   ersionOnly = rdr["hcfa npi loc 33b code"].ToString(),
305
306
                                   PractitionerBillingOther FormLocator33B HCFA1500NPIVersionOnl
                                   y = rdr["hcfa_npi_loc_33b_other"].ToString(),
307
308
                                   Comments = rdr["comments"].ToString()
309
                               });
310
                           }
311
312
313
314
315
316
                       }
317
318
319
                  //return true;
320
              }
321
322
              public OdbcCommand SQLCaseMgmt(string FROM, string Thru, List<string>
              Componets, List<string> ExcludePrograms = null, List<string> ExcludeFS = null)
323
324
                  OdbcCommand cmd = new OdbcCommand();
325
                 // cmd.CommandText = "SELECT PATID, Service, COUNT(*) as Tot, Program,
                 Staffid, DOS" +
                                     " FROM pmhc CaseMgmt " +
326
                 //
                                    "WHERE ((DOS >= '" + FROM + "' and DOS <= '" + Thru + "')" +
327
                 11
                 //
328
                                     "AND Service IN
```

rdr["svc note text 837d"].ToString(),

```
329
                  //
                                      "GROUP BY PATID, Service " +
330
                  //
                                     "ORDER BY PATID";
331
332
                  StringBuilder bldr = new StringBuilder();
333
                  bldr.Append("SELECT PATID, Service, COUNT(*) as Tot, Program, Staffid, DOS,
                  Episode ");
334
                  bldr.Append(" FROM pmhc CaseMgmt ");
                  bldr.Append("WHERE (DOS >= '" + FROM + "' and DOS <= '" + Thru + "' ");
335
336
337
                  if (Componets != null)
338
339
                       bldr.Append(IterateExlusion("Service", false, Componets, true));
340
                   }
                  if (ServiceExclude != null)
341
342
                   {
343
                       bldr.Append(IterateExlusion("Service", false, ServiceExclude, true));
344
                   }
345
346
                  if (ProgramExclude != null)
347
348
                       bldr.Append(IterateExlusion("Program", true, ProgramExclude));
349
                   1
350
                  if (ProgramInclude != null)
351
                       bldr.Append(IterateExlusion("Program", false, ProgramInclude));
352
353
                   }
354
355
                  if (ExcludeFS != null)
356
357
                       bldr.Append(IterateExlusion("Guar", true, ExcludeFS));
358
                  }
359
                  if (FSInclude != null)
360
361
362
                       bldr.Append(IterateExlusion("Guar", false, FSInclude));
363
                   }
364
365
                  bldr.Append(")");
366
                  bldr.Append(" GROUP BY PATID, Service ");
367
                  bldr.Append(" ORDER BY PATID");
368
369
                  cmd.CommandText = bldr.ToString();
370
371
372
                  return cmd;
373
              }
374
375
              string IterateExlusion(string exlusionField, bool notIn, List<string>
              ExcludePrograms, bool isComponets = false)
376
              {
377
                  StringBuilder bldr = new StringBuilder();
378
379
                  if (ExcludePrograms != null)
380
                   {
381
                       for (int i = 0; i < ExcludePrograms.Count; i++)</pre>
382
                       {
383
                           if (ExcludePrograms.Count != 1 && i == ExcludePrograms.Count - 1)
384
                           {
385
                               if (isComponets)
386
                               {
                                   bldr.Append(",'" + ExcludePrograms[i] + "', '" +
387
                                   BillableCode + "')");
388
                               } else
389
                               {
390
                                   bldr.Append(",'" + ExcludePrograms[i] + "')");
391
                               }
392
393
                           }
```

('770','770F','780','780F','790','790F','771','771F','T2023'))" +

```
394
                           else if (i != 0)
395
396
                                bldr.Append(",'" + ExcludePrograms[i] + "'");
397
                           }
398
                           else
399
                           {
400
                               if (notIn)
401
                                {
402
                                    if (ExcludePrograms.Count == 0)
403
404
                                        bldr.Append(" AND " + exlusionField + " NOT IN ('" +
                                        ExcludePrograms[i] + "')");
405
                                    } else if (ExcludePrograms.Count == 1)
406
407
                                        bldr.Append(" AND " + exlusionField + " NOT IN ('" +
408
                                        ExcludePrograms[i] + "')");
409
410
                                    }
411
                                    else
412
                                    {
413
                                        bldr.Append(" AND " + exlusionField + " NOT IN ('" +
                                        ExcludePrograms[i] + "'");
414
                                    }
415
                                }
416
                                else
417
                                {
418
                                    if (ExcludePrograms.Count == 0)
419
420
                                        bldr.Append(" AND " + exlusionField + " IN ('" +
                                        ExcludePrograms[i] + "')");
421
422
423
                                    else if (ExcludePrograms.Count == 1)
424
425
                                        bldr.Append(" AND " + exlusionField + " IN ('" +
                                        ExcludePrograms[i] + "')");
426
427
                                    }
428
                                    else
429
                                    {
                                        bldr.Append(" AND " + exlusionField + " IN ('" +
430
                                        ExcludePrograms[i] + "'");
431
432
                                    }
433
                               }
434
                           }
435
                       }
436
437
                       return bldr.ToString();
438
                   } else
439
                   {
440
                       throw new Exception ("No items in Exlusion Critiera");
441
                   }
442
              }
443
444
              public void LoadFile()
445
446
                   XElement info = XElement.Load("Requirements.xml");
447
                   Rules = from el in info.Elements()
448
                           select el;
449
               }
450
451
452
453
              public void LoadRule(string RuleName)
454
455
                   currentRule = from el in Rules.Elements()
                                  where el.Name == "Name" && el.Value == RuleName
456
```

```
457
                                 select el.Parent;
458
459
                   ProcessRule();
460
461
                   CurrentRuleTitle = RuleName;
462
463
464
              }
465
466
              //Process current rule.
467
              //This sets all logic for building the SQL Query
468
              public void ProcessRule()
469
              {
470
471
                   foreach (var item in currentRule.Elements("Billable"))
472
473
                       BillableCode = item.Value;
474
                   }
475
476
                   Componets.Clear();
477
                   ProgramExclude.Clear();
478
                   FSExclude.Clear();
479
                  ServiceExclude.Clear();
480
                  ProgramInclude.Clear();
481
                   FSInclude.Clear();
482
                   OverrideStaff = false;
483
                   OverrideStaffID = "";
484
485
                   foreach (var item in currentRule.Elements("Componets").Elements("Componet"))
486
                   {
487
                       Componets.Add(item.Value);
488
                   }
489
                   foreach (var item in
490
                   currentRule.Elements("ExcludeServices").Elements("ExcludeService"))
491
492
                       ServiceExclude.Add(item.Value);
493
                   }
494
495
                   foreach (var item in
                   currentRule.Elements("ExcludePrograms").Elements("ExcludeProgram"))
496
                   {
497
                       ProgramExclude.Add(item.Value);
498
                   }
499
500
                   foreach (var item in
                   currentRule.Elements("IncludePrograms").Elements("IncludeProgram"))
501
502
                       ProgramInclude.Add(item.Value);
503
                   }
504
505
                   foreach (var item in
                   currentRule.Elements("IncludeFSs").Elements("IncludeFS"))
506
                   {
507
                       FSInclude.Add(item.Value);
508
                   }
509
510
                   foreach (var item in currentRule.Elements("Rules"))
511
512
                       if (item.Element("FTF").Name == "FTF")
513
                       {
514
                           ReqFTF = int.Parse(item.Element("FTF").Value);
515
                       }
516
517
                       if (item.Element("Total").Name == "Total")
518
                       {
519
                           ReqTot = int.Parse(item.Element("Total").Value);
520
                       }
521
```

```
if (item.Element("OverrideStaff") != null &&
522
                      item.Element("OverrideStaff").Name == "OverrideStaff")
523
524
                           OverrideStaff = true;
525
                           OverrideStaffID = item.Element("OverrideStaff").Value;
526
                       }
527
                      if (item.Element("ServiceType") != null &&
528
                      item.Element("ServiceType").Name == "ServiceType")
529
530
                           currentServiceType =
                           (ServiceRecord.ServiceType) int.Parse(item.Element("ServiceType").Valu
                           e);
531
                       } else
532
                       {
533
                           currentServiceType = ServiceRecord.ServiceType.Other;
534
                       }
535
                  }
536
                 // System.Windows.Forms.MessageBox.Show("BIllable- " + BillableCode + "
537
                 FTF-" + ReqFTF.ToString() + " TOT-" + ReqTot.ToString());
538
539
                  //if (((XElement)currentRule.Elements("ExcludePrograms"))))
540
              }
541
542
              public void ProcessServiceExportFile()
543
544
                  FileHelperEngine<ServiceRecord> engine = new
                  FileHelperEngine<ServiceRecord>();
545
                  var pathWithEnv = @"%USERPROFILE%\Desktop\OutputServiceFile.txt";
546
                  var filePath = Environment.ExpandEnvironmentVariables(pathWithEnv);
547
                  engine.WriteFile(filePath, this.ServList);
548
                  System.Windows.Forms.MessageBox.Show("File Processed and sent to Desktop.");
549
550
              }
551
552
553
          }
554
555
556
557
558
          [DelimitedRecord("\t")]
559
          public class ServiceRecord
560
          {
561
562
              private ServiceRecord()
563
                  this.SPI = "100";
564
565
566
567
              public enum ServiceType { ACT, CaseMgmt, StaffOnly, IDD, Other }
568
569
              public ServiceRecord (DateTime SerDate, int ep, string SerCode, string
              ProgramCode, string staffid, string clid, ServiceType srvType =
              ServiceType.Other)
570
              {
571
                  this.DOS = SerDate;
572
                  this.Service = SerCode;
573
                  this.Program = ProgramCode;
574
                  this.Pracitioner = staffid;
575
                  this.ClientID = clid;
576
                  this.Episode = ep;
577
                  if (srvType == ServiceType.ACT || srvType == ServiceType.CaseMgmt)
578
                  {
579
                       this.SPI = "100";
                      this.Location = "1";
580
581
                  }
582
```

```
583
                  if (srvType == ServiceType.IDD)
584
                       this.SPI = "200";
585
                       this.Location = "10";
586
587
588
                   }
589
              }
590
              [FieldOrder(1)]
591
              [FieldConverter(ConverterKind.Date, "MMddyyyy")]
592
              public DateTime DOS;
593
              [FieldOrder(2)]
594
              public string Service { get; set; }
595
              [FieldOrder(3)]
596
              public string Program { get; set; }
597
              [FieldOrder(4)]
              public string Pracitioner { get; set; }
598
599
              [FieldOrder(5)]
600
              public string ClientID { get; set; }
601
              [FieldOrder(6)]
602
              public int? Episode { get; set; }
603
              [FieldOrder(7)]
604
              public string GroupNumber { get; set; }
605
              [FieldOrder(8)]
606
              public int? NumberOfClients { get; set; }
607
              [FieldOrder(9)]
608
              public int? Duration { get; set; }
609
              [FieldOrder(10)]
610
              public string Location { get; set; }
611
              [FieldOrder(11)]
612
              public int? Units { get; set; }
613
              [FieldOrder(12)]
614
              public double? Cost { get; set; }
615
              [FieldOrder(13)]
616
              public string isBillable { get; set; }
617
              [FieldOrder(14)]
618
              public string costaff1 { get; set; }
619
              [FieldOrder (15)]
620
              public string costaff2 { get; set; }
621
              [FieldOrder (16)]
622
              public string refferStaff { get; set; }
623
              [FieldOrder(17)]
624
              public string refferProvider { get; set; }
625
              [FieldOrder(18)]
626
              public string MedDiag1 { get; set; }
              [FieldOrder(19)]
627
628
              public string MedDiag2 { get; set; }
629
630
              [FieldOrder(20)]
631
              public string Modifiers { get; set; }
632
633
              [FieldOrder(21)]
634
              public string Service Start Time { get; set; }
635
              [FieldOrder(22)]
636
              public string Service End Time { get; set; }
637
              [FieldOrder(23)]
638
              public string Tooth_Number { get; set; }
639
              [FieldOrder(24)]
640
              public string Tooth Status Code { get; set; }
641
              [FieldOrder(25)]
642
              public string Tooth_Surface_Code { get; set; }
643
              [FieldOrder(26)]
644
              public string Oral Cavity Designation Code { get; set; }
645
              [FieldOrder(27)]
646
              public string Prosthesis Crown Or Inlay Code { get; set; }
647
              [FieldOrder(28)]
648
              public string Prior Placement Date { get; set; }
649
              [FieldOrder(29)]
650
              public string Note_Reference_Text_837_Billing { get; set; }
651
              [FieldOrder(30)]
```

```
652
              public string Note Reference Code 837 Billing { get; set; }
653
              [FieldOrder(31)]
654
              public string Appointment Date { get; set; }
655
              [FieldOrder(32)]
656
              public string Appointment Start Time { get; set; }
657
              [FieldOrder (33)]
658
              public string Appointment End Time { get; set; }
659
              [FieldOrder(34)]
660
              public string Appointment Site { get; set; }
661
              [FieldOrder (35)]
662
              public string Appointment Status { get; set; }
663
              [FieldOrder(36)]
664
              public string Appointment Notes { get; set; }
665
              [FieldOrder(37)]
666
              public string Appointment Confirmed { get; set; }
667
              [FieldOrder(38)]
668
              public string Confirmation Notes { get; set; }
669
              [FieldOrder(39)]
670
              public string Missed Visit { get; set; }
671
              [FieldOrder(40)]
672
              public string Missed Visit Service Code { get; set; }
673
              [FieldOrder(41)]
674
              public string Missed Visit Notes { get; set; }
675
              [FieldOrder(42)]
676
              public string Medical Diagnosis 3 { get; set; }
677
              [FieldOrder(43)]
678
              public string Medical Diagnosis 4 { get; set; }
679
              [FieldOrder(44)]
680
              public string Discipline { get; set; }
681
              [FieldOrder(45)]
682
              public string Service Status { get; set; }
683
              [FieldOrder(46)]
684
              public string Initial Treatment Date 2300DTP03 { get; set; }
685
              [FieldOrder(47)]
686
              public string Date Of Accident 2300DTP03 { get; set; }
687
              [FieldOrder (48)]
688
              public string Form Locator 10 Auto Accident Place { get; set; }
689
              [FieldOrder(49)]
690
              public string Related Causes Information 2300CLM11 { get; set; }
691
              [FieldOrder(50)]
692
              public string First Billing Date { get; set; }
693
              [FieldOrder (51)]
694
              public string Additional Service Information { get; set; }
695
              [FieldOrder (52)]
696
              public string Psychotherapy AddOn Duration { get; set; }
697
              [FieldOrder (53)]
698
              public string AddOn Notes { get; set; }
699
              [FieldOrder (54)]
700
              public string ICD10 Diagnosis Code 1 { get; set; }
701
              [FieldOrder (55)]
702
              public string ICD10 Diagnosis Code 2 { get; set; }
703
              [FieldOrder (56)]
704
              public string ICD10 Diagnosis Code 3 { get; set; }
705
              [FieldOrder (57)]
706
              public string ICD10 Diagnosis Code 4 { get; set; }
707
              [FieldOrder (58)]
708
              public string Reserved for future development { get; set; }
709
              [FieldOrder (59)]
710
              public string Reserved for future development1 { get; set; }
711
              [FieldOrder(60)]
712
              public string Reserved for future development2 { get; set; }
713
              [FieldOrder(61)]
714
              public string Reserved for future development3 { get; set; }
715
              [FieldOrder(62)]
716
              public string Reserved for future development4 { get; set; }
717
              [FieldOrder (63)]
718
              public string Reserved_for_future_development5 { get; set; }
719
              [FieldOrder(64)]
720
              public string Reserved for future development6 { get; set; }
```

```
721
              [FieldOrder (65)]
722
              public string Reserved for future development7 { get; set; }
723
              [FieldOrder (66)]
724
              public string Reserved for future development8 { get; set; }
725
              [FieldOrder (67)]
              public string Reserved for future development9 { get; set; }
726
727
              [FieldOrder(68)]
728
              public string Reserved for future development10 { get; set; }
729
              [FieldOrder (69)]
730
              public string Reserved for future development11 { get; set; }
731
              [FieldOrder(70)]
732
              public string Reserved for future development12 { get; set; }
733
              [FieldOrder (71)]
734
              public string Reserved for future development13 { get; set; }
735
              [FieldOrder(72)]
736
              public string Reserved for future development14 { get; set; }
737
              [FieldOrder (73)]
738
              public string Reserved for future development15 { get; set; }
739
              [FieldOrder(74)]
740
              public string Reserved for future development16 { get; set; }
741
              [FieldOrder (75)]
742
              public string Reserved for future development17 { get; set; }
743
              [FieldOrder (76)]
744
              public string Reserved for future development18 { get; set; }
745
              [FieldOrder (77)]
746
              public string Reserved for future development19 { get; set; }
747
              [FieldOrder (78)]
748
              public string Reserved for future development20 { get; set; }
749
              [FieldOrder (79)]
750
              public string Reserved for future development21 { get; set; }
751
              [FieldOrder(80)]
752
              public string Reserved for future development22 { get; set; }
753
              [FieldOrder(81)]
              public string Reserved for future development23 { get; set; }
754
755
              [FieldOrder(82)]
756
              public string Reserved for future development24 { get; set; }
757
              [FieldOrder(83)]
758
              public string Reserved for future development25 { get; set; }
759
              [FieldOrder(84)]
760
              public string Reserved for future development26 { get; set; }
761
              [FieldOrder(85)]
762
              public string Reserved for future development27 { get; set; }
763
              [FieldOrder(86)]
764
              public string Reserved for future development28 { get; set; }
765
              [FieldOrder(87)]
766
              public string Reserved for future development29 { get; set; }
767
              [FieldOrder(88)]
768
              public string Reserved for future development30 { get; set; }
769
              [FieldOrder(89)]
770
              public string Reserved for future development31 { get; set; }
771
              [FieldOrder(90)]
772
              public string Reserved for future development32 { get; set; }
773
              [FieldOrder(91)]
774
              public string Reserved for future development33 { get; set; }
775
              [FieldOrder(92)]
776
              public string Reserved_for_future_development34 { get; set; }
777
              [FieldOrder(93)]
778
              public string Reserved for future development35 { get; set; }
779
              [FieldOrder (94)]
              public string Reserved_for future development36 { get; set; }
780
              [FieldOrder(95)]
781
782
              public string Reserved for future development37 { get; set; }
783
              [FieldOrder(96)]
784
              public string Reserved for future development38 { get; set; }
785
              [FieldOrder (97)]
786
              public string Reserved for future development39 { get; set; }
787
              [FieldOrder(98)]
788
              public string Reserved for future development40 { get; set; }
789
              [FieldOrder(99)]
```

```
790
              public string Reserved for future development41 { get; set; }
791
              [FieldOrder(100)]
792
              public string SS Treatment_Free_Text_10_1 { get; set; }
793
              [FieldOrder (101)]
794
              public string SS Treatment Free Text 10 2 { get; set; }
795
              [FieldOrder (102)]
796
              public string SS Treatment Free Text 10 3 { get; set; }
797
              [FieldOrder (103)]
798
              public string SS Treatment Free Text 10 4 { get; set; }
799
              [FieldOrder (104)]
800
              public string SS Treatment Free Text 10 5 { get; set; }
801
              [FieldOrder(105)]
802
              public string SS Treatment Free Text 40 1 { get; set; }
803
              [FieldOrder (106)]
              public string SS Treatment Free Text 40 2 { get; set; }
804
805
              [FieldOrder (107)]
806
              public string SS_Treatment_Free_Text_40_3 { get; set; }
807
              [FieldOrder(108)]
808
              public string SS Treatment Free Text 40 4 { get; set; }
809
              [FieldOrder(109)]
810
              public string SS Treatment Free Text 40 5 { get; set; }
811
              [FieldOrder (110)]
812
              public string SS Treatment Free Text 80 1 { get; set; }
813
              [FieldOrder(111)]
814
              public string SS Treatment Free Text 80 2 { get; set; }
815
              [FieldOrder (112)]
816
              public string SS Treatment Free Text 80 3 { get; set; }
817
              [FieldOrder (113)]
818
              public string SS Treatment Free Text 80 4 { get; set; }
819
              [FieldOrder(114)]
820
              public string SS Treatment Free Text 80 5 { get; set; }
821
              [FieldOrder (115)]
822
              public string SS Treatment Scrolling Free Text 1 { get; set; }
823
              [FieldOrder (116)]
824
              public string SS Treatment Scrolling Free Text 2 { get; set; }
825
              [FieldOrder (117)]
826
              public string SS Treatment Scrolling Free Text 3 { get; set; }
827
              [FieldOrder (118)]
828
              public string SS_Treatment_Scrolling_Free_Text_4 { get; set; }
829
              [FieldOrder (119)]
830
              public string SS Treatment Scrolling Free Text 5 { get; set; }
831
              [FieldOrder(120)]
              public string SPI { get; set; }
832
833
              [FieldOrder (121)]
834
              public string SS Treatment Dictionary 2 { get; set; }
835
              [FieldOrder (122)]
836
              public string SS Treatment Dictionary 3 { get; set; }
837
              [FieldOrder (123)]
838
              public string SS Treatment Dictionary 4 { get; set; }
839
              [FieldOrder (124)]
840
              public string SS Treatment Dictionary 5 { get; set; }
841
              [FieldOrder (125)]
842
              public string SS Treatment Dictionary 6 { get; set; }
843
              [FieldOrder (126)]
              public string SS Treatment Dictionary 7 { get; set; }
844
845
              [FieldOrder(127)]
846
              public string SS_Treatment_Dictionary_8 { get; set; }
847
              [FieldOrder (128)]
848
              public string SS Treatment Dictionary 9 { get; set; }
849
              [FieldOrder (129)]
850
              public string SS_Treatment_ICD9_Code_1 { get; set; }
851
              [FieldOrder (130)]
852
              public string SS Treatment ICD9 Code 2 { get; set; }
853
              [FieldOrder(131)]
854
              public string SS Treatment ICD9 Code 3 { get; set; }
855
              [FieldOrder (132)]
856
              public string SS_Treatment_ICD9_Code_4 { get; set; }
857
              [FieldOrder (133)]
858
              public string SS Treatment ICD9 Code 5 { get; set; }
```

```
859
              [FieldOrder (134)]
860
              public string SS Treatment Date 1 { get; set; }
861
              [FieldOrder (135)]
862
              public string SS Treatment Date 2 { get; set; }
863
              [FieldOrder (136)]
864
              public string SS_Treatment_Date_3 { get; set; }
865
              [FieldOrder(137)]
866
              public string SS Treatment Date 4 { get; set; }
867
              [FieldOrder (138)]
868
              public string SS Treatment Date 5 { get; set; }
869
              [FieldOrder (139)]
870
              public string SS Treatment Practitioner 1 { get; set; }
871
              [FieldOrder(140)]
872
              public string SS Treatment Practitioner 2 { get; set; }
873
              [FieldOrder(141)]
874
              public string SS Treatment Practitioner 3 { get; set; }
875
              [FieldOrder (142)]
876
              public string SS Treatment Practitioner 4 { get; set; }
877
              [FieldOrder(143)]
878
              public string SS Treatment Practitioner 5 { get; set; }
879
              [FieldOrder(144)]
880
              public string SS Treatment Guarantor 1 { get; set; }
881
              [FieldOrder(145)]
882
              public string SS Treatment Guarantor 2 { get; set; }
883
              [FieldOrder (146)]
884
              public string SS Treatment Guarantor 3 { get; set; }
885
              [FieldOrder (147)]
886
              public string SS_Treatment_Guarantor_4 { get; set; }
887
              [FieldOrder(148)]
888
              public string SS Treatment Guarantor 5 { get; set; }
889
              [FieldOrder (149)]
890
              public string SS Treatment DSM Code 1 { get; set; }
891
              [FieldOrder (150)]
892
              public string SS Treatment DSM Code 2 { get; set; }
893
              [FieldOrder (151)]
894
              public string SS Treatment DSM Code 3 { get; set; }
895
              [FieldOrder (152)]
896
              public string SS Treatment_DSM_Code_4 { get; set; }
897
              [FieldOrder (153)]
898
              public string SS Treatment DSM Code 5 { get; set; }
899
              [FieldOrder(154)]
900
              public string SS Treatment Multiple Select Dictionary 1 { get; set; }
901
              [FieldOrder (155)]
902
              public string SS Treatment Multiple Select Dictionary 2 { get; set; }
903
              [FieldOrder (156)]
904
              public string Guarantor 1 { get; set; }
905
              [FieldOrder(157)]
906
              public string Amount1 { get; set; }
907
              [FieldOrder (158)]
908
              public string Guarantor_2 { get; set; }
909
              [FieldOrder(159)]
910
              public string Amount2 { get; set; }
911
              [FieldOrder (160)]
912
              public string Guarantor 3 { get; set; }
913
              [FieldOrder (161)]
914
              public string Amount3 { get; set; }
915
              [FieldOrder (162)]
916
              public string Guarantor_4 { get; set; }
917
              [FieldOrder (163)]
918
              public string Amount4 { get; set; }
              [FieldOrder(164)]
919
920
              public string Guarantor 5 { get; set; }
921
              [FieldOrder (165)]
922
              public string Amount5 { get; set; }
923
              [FieldOrder (166)]
924
              public string Guarantor 6 { get; set; }
925
              [FieldOrder(167)]
926
              public string Amount6 { get; set; }
927
              [FieldOrder (168)]
```

```
928
              public string Guarantor_7 { get; set; }
929
              [FieldOrder(169)]
930
              public string Amount7 { get; set; }
931
              [FieldOrder (170)]
932
              public string Guarantor 8 { get; set; }
933
              [FieldOrder(171)]
934
              public string Amount8 { get; set; }
935
              [FieldOrder (172)]
936
              public string Guarantor 9 { get; set; }
937
              [FieldOrder (173)]
938
              public string Amount9 { get; set; }
939
              [FieldOrder(174)]
940
              public string Guarantor 10 { get; set; }
              [FieldOrder (175)]
941
942
              public string Amount10 { get; set; }
943
              [FieldOrder (176)]
944
              public string SS_Treatment_Integer_1 { get; set; }
945
              [FieldOrder(177)]
946
              public string SS Treatment Integer 2 { get; set; }
947
              [FieldOrder(178)]
948
              public string SS Treatment Integer_3 { get; set; }
949
              [FieldOrder(179)]
950
              public string SS Treatment Integer 4 { get; set; }
951
              [FieldOrder(180)]
952
              public string SS Treatment Integer 5 { get; set; }
953
              [FieldOrder(181)]
954
              public string SS Treatment Integer 6 { get; set; }
955
              [FieldOrder(182)]
956
              public string IncidentTo Practitioner { get; set; }
957
958
959
960
          }
961
962
          enum month { January = 1, February, March, April, May, June, July, August,
          September, October, November, December }
963
964
965
966
967
      }
968
```