PROG 3B POE

Research

Contents

Introduction

As part of our PROG 3B POE, we are to research and detail a multi-level Dewey Decimal call number list to the third level. This list will be incorporated into the application, in a way that it can be read by the application tree structure. The application will use this information to provide questions for the "Find Call Numbers" task. This allows users to view a randomly selected third level call number description, and then be provided with each level call number and description until the user reaches the final third level call number and description. The user can "drill down" this hierarchical tree structure until they reach the second and then final (3rd) level Dewey Decimal record.

The following section provides all information which will be used by the system, and this will be converted to a Comma Separated Value (CSV) file, which will be read into the application at runtime. I have used a CSV file as it is easier to visualize than if it is stored in an MDF or similar database file. A CSV provides a multi-level appearance, and this information is read into the tree structure within the application.

This research has been carried out to identify suitable Dewey Decimal call numbers which can be used as questions / answers in the application. I have identified 160 unique entries, as the question paper has stipulated that the application provide four possible answers for each level (4x4) and there is a total of ten categories (000 through 900). Therefore, 160 entries have been identified and included in the following section and then converted to CSV for the application.

A single source has been used to find these call numbers and descriptions: A book which was created by Melvin Dewey, the developer of the Dewey Decimal classification system. The book is free to use, and is accessible on Gutenberg, and the reference has been included in the reference list at the end of this document.

Dewey Decimals

The below examples of Dewey Decimals are stored in a way that the application can read the data into a tree structure, from level one to level three.

- 000 Computer science, information & general works
  - 000 Computer science, knowledge & systems
    - 001 Knowledge
    - 003 Systems
    - 004 Data processing & computer science
    - 005 Computer programming, programs & data
  - 010 Bibliographies
    - 012 Bibliographies of individuals
    - 015 Bibliographies of works from specific places
    - 017 General subject catalogs
    - 019 Dictionary catalogs
  - 020 Library & information sciences
    - 023 Personnel management
    - 025 Library operations
    - 026 Libraries for specific subjects
    - 028 Reading & use of other information media
  - 030 Encyclopedias & books of facts
    - 031 Encyclopedias in American English
    - 032 Encyclopedias in English
    - 034 Encyclopedias in French, Occitan, and Catalan
    - 035 Encyclopedias in Italian, Romanian, and related languages
- 100 Philosophy & psychology
  - 100 Philosophy
    - 101 Theory of philosophy
    - 103 Dictionaries & encyclopedias
    - 107 Education, research, related topics of philosophy
    - 109 History & collected biography
  - 110 Metaphysics
    - 111 Ontology
    - 113 Cosmology (Philosophy of nature)
    - 117 Structure
    - 118 Force and energy
  - 140 Philosophical schools of thought
    - 141 Idealism & related systems & doctrines
    - 142 Critical philosophy
    - 143 Bergsonism & intuitionism
    - 145 Sensationalism

- o 170 Ethics
  - ▪ 171 Ethical systems
  - ▪ 172 Political ethics
  - ▪ 173 Ethics of family relationships
  - ▪ 174 Occupational ethics
- 200 Religion
  - o 210 Philosophy & theory of religion
    - ▪ 211 Concepts of God
    - ▪ 212 Existence, ways of knowing God, attributes of God
    - ▪ 214 Theodicy
    - ▪ 215 Science & religion
  - o 220 The Bible
    - ▪ 222 Historical books of Old Testament
    - ▪ 223 Poetic books of Old Testament
    - ▪ 224 Prophetic books of Old Testament
    - ▪ 225 New Testament
  - o 260 Social & ecclesiastical theology
    - ▪ 261 Social theology and interreligious relations and attitudes
    - ▪ 262 Ecclesiology
    - ▪ 263 Days, times, places of religious observance
    - ▪ 264 Public worship
  - o 290 Other religions
    - ▪ 292 Classical religion (Greek & Roman religion)
    - ▪ 293 Germanic religion
    - ▪ 294 Religions of Indic origin
    - ▪ 295 Zoroastrianism (Mazdaism, Parseeism)
- 300 Social sciences
  - o 310 Statistics
    - ▪ 314 General statistics of Europe
    - ▪ 315 General statistics of Asia
    - ▪ 316 General statistics of Africa
    - ▪ 317 General statistics of North America
  - o 330 Economics
    - ▪ 331 Labor economics
    - ▪ 332 Financial economics
    - ▪ 333 Economics of land & energy
    - ▪ 337 International economics
  - o 370 Education
    - ▪ 372 Primary education (elementary education)
    - ▪ 373 Secondary education
    - ▪ 378 Higher education (Tertiary education)
    - ▪ 379 Public policy issues in education

- o 380 Commerce, communications, & transportation
  - 381 Commerce (Trade)
  - 382 International commerce (Foreign trade)
  - 383 Postal communication
  - 384 Communications
- 400 Language
  - o 410 Linguistics
    - 411 Writing systems of standard forms of languages
    - 412 Etymology of standard forms of languages
    - 413 Dictionaries of standard forms of languages
    - 414 Phonology & phonetics of standard forms of languages
  - o 420 English & Old English languages
    - 421 Writing system, phonology, phonetics of standard English
    - 422 Etymology of standard English
    - 423 Dictionaries of standard English
    - 425 Grammar of standard English
  - o 440 French & related languages
    - 441 Writing systems, phonology, phonetics of standard French
    - 442 Etymology of standard French
    - 443 Dictionaries of standard French
    - 445 Grammar of standard French
  - o 470 Latin & Italic languages
    - 471 Writing systems, phonology, phonetics of classical Latin
    - 472 Etymology of classical Latin
    - 473 Dictionaries of classical Latin
    - 475 Grammar of classical Latin
- 500 Science
  - o 510 Mathematics
    - 511 General principles of mathematics
    - 512 Algebra
    - 513 Arithmetic
    - 514 Topology
  - o 520 Astronomy
    - 521 Celestial mechanics
    - 522 Techniques, procedures, apparatus, equipment, materials
    - 523 Specific celestial bodies & phenomena
    - 525 Earth (Astronomical geography)
  - o 540 Chemistry
    - 541 Physical chemistry
    - 542 Techniques, procedures, apparatus, equipment, materials
    - 543 Analytical chemistry
    - 547 Organic chemistry

- o 570 Biology
  - 572 Biochemistry
  - 575 Specific parts of & physiological systems in plants
  - 576 Genetics and evolution
  - 577 Ecology
- **600 Technology**
  - o 610 Medicine & health
    - 611 Human anatomy, cytology, histology
    - 612 Human physiology
    - 613 Personal health & safety
    - 615 Pharmacology and therapeutics
  - o 620 Engineering
    - 621 Applied physics
    - 622 Mining & related operations
    - 623 Military & nautical engineering
    - 624 Civil engineering
  - o 630 Agriculture
    - 632 Plant injuries, diseases, pests
    - 633 Field & plantation crops
    - 634 Orchards, fruits, forestry
    - 635 Garden crops (Horticulture)
  - o 640 Home & family management
    - 641 Food & drink
    - 642 Meals & table service
    - 643 Housing & household equipment
    - 644 Household utilities
- **700 Arts & recreation**
  - o 720 Architecture
    - 721 Architectural materials & structural elements
    - 725 Public structures
    - 727 Buildings for educational & research purposes
    - 728 Residential & related buildings
  - o 750 Painting
    - 751 Techniques, procedures, apparatus, equipment, materials, forms
    - 752 Color
    - 753 Symbolism, allegory, mythology, legend
    - 754 Genre paintings
  - o 770 Photography, computer art, film, video
    - 771 Techniques, procedures, apparatus, equipment, materials
    - 772 Metallic salt processes
    - 773 Pigment processes of printing
    - 776 Computer art (Digital art)

- o 780 Music
  - 781 General principles & musical forms
  - 782 Vocal music
  - 783 Music for single voices
  - 784 Instruments & Instrumental ensembles & their music
- **800 Literature**
  - o 810 American literature in English
    - 811 American poetry in English
    - 812 American drama in English
    - 813 American fiction in English
    - 814 American essays in English
  - o 820 English & Old English literatures
    - 821 English Poetry
    - 822 English drama
    - 823 English fiction
    - 824 English essays
  - o 840 French & related literatures
    - 841 French poetry
    - 842 French drama
    - 843 French fiction
    - 844 French essays
  - o 890 Other literatures
    - 891 East Indo-European & Celtic literatures
    - 892 Afro-Asiatic literatures
    - 897 Literatures of North American native languages
    - 898 Literatures of South American native languages
- **900 History & geography**
  - o 910 Geography & travel
    - 911 Historical geography
    - 913 Geography of & travel in ancient world
    - 914 Geography of & travel in Europe
    - 917 Geography of & travel in North America
  - o 940 History of Europe
    - 942 England & Wales
    - 943 Germany & neighboring central European countries
    - 944 France & Monaco
    - 945 Italy, San Marino, Vatican City, Malta
  - o 950 History of Asia
    - 951 China & adjacent areas
    - 952 Japan
    - 953 Arabian Peninsula & adjacent areas
    - 954 India & neighboring south Asian countries

- 970 History of North America
    - 971 Canada
    - 972 Mexico, Central America, West Indies, Bermuda
    - 973 United States
    - 976 South central United States

These Dewey Decimal classes were initially published by Melvil Dewey, who was the inventor of the Dewey Decimal classification system (Dewey, 2004).

Conclusion

In conclusion, a three-tiered list of Dewey Decimals was obtained from the author, and inventor, of the Dewey Decimal system, Melvin Dewey (Dewey, 2004). This list of Dewey Decimals has been converted to a CSV file, which is read into a tree structure in the Dewey Decimal application, and used for comparisons to determine if the user has selected the correct level one, two and three call number and description.

This research has provided the required information to proceed to the implementation phase of this assignment, which is to develop a feature in the Dewey Training application to find call numbers, by drilling down from the top level, to the second level, and finally the third level call number and description. A tree structure is used to store the information pulled in from the CSV file, which determines all possible questions, and therefore all model answers – which are used for comparisons.

References

Dewey, M., 2004. *A Classification and Subject Index for Cataloguing and Arranging the Books and Pamphlets of a Library [Dewey Decimal Classification].* 1 ed. Kingsport: Kingsport Press.