Ex. No.: 12 Date: 24/4/25

AIM:

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File Organization Technique- Single and Two level directory

To implement File Organization Structures in C are

- a. Single Level Directory
- b. Two-Level Directory
- c. Hierarchical Directory Structure
- d. Directed Acyclic Graph Structure

a. Single Level

Directory

ALGORITHM

- 1. Start
- Declare the number, names and size of the directories and file names.
- Get the values for the declared variables.
- 4. Display the files that are available in the directories.
- 5. Stop.

PROGRAM:

include < stdioin>
include < stdioin>
include < string h>
include < string h>
include < math h>
define Max.files to

char filename [Max.files J[20];
int file Count =0:
float file x[Max-files];

```
void draw Circle (float x, float x, float rad) {
           int i;
           int tri Amt = 100;
           float angle;
           91 Begin ( GL TRIANGLE-FAN);
          gl hertexof (xy)
          for ( c= string , # c != 10 ; c ++)
          glut Bitmap Character (font, +0);
void display 1) f
   glolean CGIL_COLOR_BUFFER_BITT);
  gl Color 3+ (10,0.0,1.0);
  gl Begin (GL QUADS).
        gl Vertex 2+ (290,400).
        glvertex 2/ (390, 400).
       glvertex 2/ (390, 450).
       glvertex of (290, 450).
    gl End();
 gl Color st 6,0,0);
  render Bitmap String (315, 420, GLUT_BITMAP-HELVETICALIS
 Corcint i=0; ix file count; 1++) of
                                            " Root" ).
           bloat x = file x [i]:
           float y = 250;
```

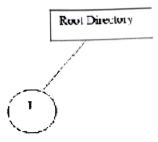
```
gl Color 3f (0.0, 0.0, 1.0);
              gl Begin (GL-LINES):
                 9 Vertex 2+ (340, 200)
                 gl Vertex of (20, y+30);
          glEnd();
         gl Color 3 (0.2,0.8,0.2)
        draw Circle (x, y, 30);
         g/Color 3+ (0,0,0);
        render Bitmap String CX-20, 4-5, 6WT. BITMAP-
                                             HBLVETICA-172,
                                     filenames [i];
       glFlush();
void init open 6,2() }
          gl Clear Color (0.8,10,0.8,10):
         gl Matrix Model GL- PROJECTION);
          glu Ortho & D (0, 640, 0, 480);
int main (intage thor + angr)
             printf ("Enter no. of files (max %d): "max-file
              Scanb ("/od", & file Count);
             if (file Count > Mex-files)
               2 prints ("Too many files. Max is Yod In's
                                  MAXPIES)
                g returns
```

for 1 mm 1=0; 1= file course 1++)4 print (" Pritor rame of file %d. ", Iti). granfl" tob", file names (") int growing - and offile count +1): for int messe file count; 144) of filex17 50 141) # Spacing; glut Thit I marge, angi); glut Init DisplayMode (GILVI, SINGIE - /GILVI-RGB). glut Init Windows 12e (640, 480). Directory ghet Create Window ("Single Level File Opembol") Init Open Gills; That Dreplay Func (display); glue Maintoop ();

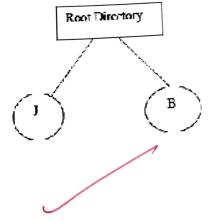
returno;

OUTPUT:

Linter the Number of files
2
Enter the file1 J



Enter the file2 B



b. Two-level directory Structure

ALGORITHM:

1. Start

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- Declare the number, names and size of the directories and subdirectories and file names
- 3. Get the values for the declared variables.
- 4. Display the files that are available in the directories and subdirectories.
- 5. Stop.

PROGRAM:

include z grat glut h>
include z gloto. h>
include < string. h>
include < math.hs

define Max-Subders 5 # define Max-file 10

char subdry [Max. Subdirs][20];

Char filename [Max. Subdirs][Max.file][20].

int subdir Count=0;

int 1/2 Count [Max a bdox] = 2

int filebount [Max_Subdir] = 203; float Subdir [Max_Subdirs].

void draw Circle (float &, floaty, float rad) [
int i;
int triangle Amt =100.

float angle: 79

glBegin(GL-Triangle fan); gl Verter 2f (xy): for (1=0) i== triAmt = i++)& angle = 2.0 & 3.1416 | wil triamt g | Vertex of (x+cos(argle) + rad ,y+ Sin Cangle) * rad) gl Ender; mender Bitmap String Gloat a float 4, word & font coast char & string) { Const char &C; gl Raster Pos 2/ (2, y) for (I= String; *C/= 10; c++) & glut Bitmap Character (font 14c) Void display (){ glacara GL-Color-Buffer Bit). gl Color 36(1,0, 20, 1.0); Olbegin Cal-Quads). gl Vertex 2/ (290, 400): gl Vertex 2 (390,400); 91 vertex 2/390,450) glvertex 2/1290_ 4502. gl End (2)

render Bitmap String (315, 420, GUT-BITMAP HELVETTCA-18 Peod" for (inti=0; 12 subdir Count: i++)? float subder XPOS = Subder XPr]: float subdryPos=250; glcolor 3/ (0.0,0,0,0,0); glosegin (GL Lines); gl Vertex of (340,400); glvertexof (SubdixxPos, SubdixyPos+30 gland () 8 Color 3/ (0.2,0,8,0.2). draw Circle (Gubdir X Pos, Subdiry 705, 30) glcolor 3+ (0,0,0): render Bitmapstring (Subdir XPos -20, Subdir YPos-5 GIVE BITMAP-Helvotica-12, Subdixs [i]). float files XPos = Sub der XPos-50;

gl Color 3+ (0,0,0);

for lint joo: je file Count [i] ; j++)

if (subder count > Max-Subder) printf (" Too many Subdirectories." Max 18%d In 7. Max Subdirs); meturn L 3 int spacing= 640 KSubdir Count +1) for (int 1=0: ic subder count: i++)} Subder [i]=(i+1) & spacing); 9 glut Init l'agray Mode Cowt_Single (GLUT_RGB); ghet I nit Window 920 [640, 480]. glut Greate windows "2 here! Directory " Open 61"). init OpenGLCs: Glut Display Func (Display); Glut Mainloopin; netumo,

gl Color 31 (0.0, p.0,1.0); glaggin (GL LINES): glivertex 2 f (Subder x Pos, Subdry Pos 30) gl Vertex 2f (file xPos, Subdiry Pos-80) gland (); 916lor 3 f (0.8,0.8,0.2) drawlinde (filex tos, Subder YPOS -80, 20). g/Color 3 (0. 2,0); nonder Bitmap String (file XPOS -15, subdryPos-8) GLOT-BIT MAP, ME ENETICA -12, filenome PIJGJ. file pos+=60; gl Husher Mut Open GL 172 glaear Color (0.8,10,0.8,10) GlMatrix Mode (GL-projection), 910 Ortho20 (0, 640,0,480); int main (int argc, chor Krargv) printf (" Ender no of subdirectories (max %d), Mar-Subdira); Scanf ("% od" & subcor Count).

Sample Output:

Enter the name of dir/file(under null): Hai How many users(for Hai):1 Enter name of dir/file(under Hai):Hello How many files(for Hello):1 Enter name of dir/file(under Hello):welcome



Result:

Hence the Single & Two level Directory Structures are implemented using C.