OS ASSIGNMENT 5

PES1UG20CS184

KUMKUM GEERVANI

WAP to truncate the files in a directory created after a certain date to half its original size.

Inputs to the program: directory and date as run time arguments

Code:

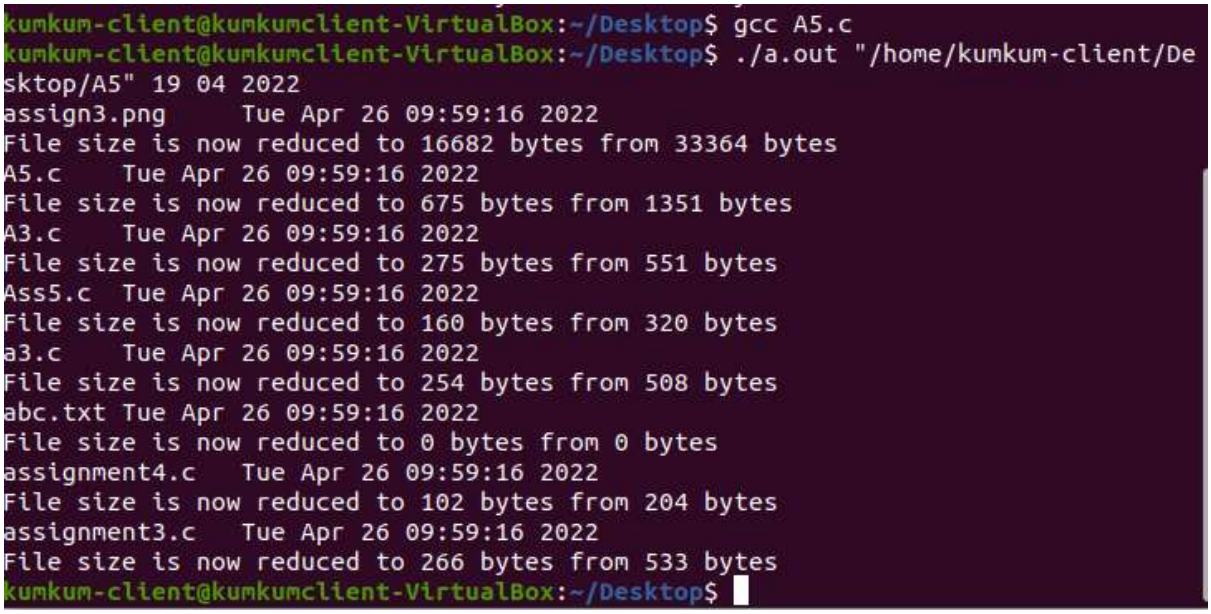
```
#include <stdio.h>
#include <dirent.h>
#include <time.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <string.h>
#include <stdlib.h>
#include <unistd.h>
#ifdef HAVE_ST_BIRTHTIME
#define birthtime(x) x.st_birthtime
#else
#define birthtime(x) x.st_ctime
#endif
int getMonth(char* month)
{
   if(strcmp(month, "Jan") == 0)
            return 1;
   else if(strcmp(month, "Feb") == 0)
            return 2;
   else if(strcmp(month, "Mar") == 0)
            return 3;
   else if(strcmp(month, "Apr") == 0)
            return 4;
```

```
    else if(strcmp(month, "May") == 0)
            return 5;
    else if(strcmp(month, "Jun") == 0)
            return 6;
    else if(strcmp(month, "Jul") == 0)
            return 7;
    else if(strcmp(month, "Aug") == 0)
            return 8;
    else if(strcmp(month, "Sep") == 0)
            return 9;
    else if(strcmp(month, "Oct") == 0)
            return 10;
    else if(strcmp(month, "Nov") == 0)
            return 11;
    else if(strcmp(month, "Dec") == 0)
            return 12;
}
int compare(int a_day, int a_month, int a_year, int day, int month, int year)
{
    if((a_year*31*12 + a_month*31 + a_day) > (year*31*12 + month*31 + day))
            return 0;
    else
            return 1;
}

int main(int argc, char** argv)
{
    struct dirent *de;
    struct tm* foo;
    int day;
    int month;
```

```
int year;
char* path = argv[1];
DIR *dr = opendir(path);
char t[ 100 ] = "";

if (dr == NULL)
{
   printf("Could not open current directory\n" );
   return 0;
}
struct stat b;
while ((de = readdir(dr)) != NULL)
{
   char name[1000];
   char file_path[10000];
   strcpy(file_path, path);
   strcpy(name,de->d_name);
   if(!strcmp(name, ".") || !strcmp(name, ".."))
        continue;
   strcat(file_path, "/");
   strcat(file_path, name);
   stat(file_path, &b);
   char* token = strtok(ctime(&b.st_mtime), " ");
   for(int i = 0; token != NULL; i++)
   {
      token = strtok(NULL, " ");
      switch(i)
      {
         case 1:
            day = atoi(token);
            break;
```

```
            case 0:
               month = getMonth(token);
               break;
            case 3:
               year = atoi(token);
               break;
            default:
               break;
         }
      }
      if(compare(atoi(argv[2]), atoi(argv[3]), atoi(argv[4]), day, month, year))
      {
         int size = b.st_size;
         truncate(file_path,size/2);
         printf("%s\t%s", name, ctime(&b.st_mtime));
         printf("File size is now reduced to %d bytes from %d bytes\n",size/2,size);
      }
   }
   closedir(dr);
   return 0;
}
```

Output:


kumkum-client@kumkumclient-VirtualBox:~/Desktop$ gcc A5.c
kumkum-client@kumkumclient-VirtualBox:~/Desktop$ ./a.out "/home/kumkum-client/De
sktop/A5" 19 04 2022
assign3.png Tue Apr 26 09:59:16 2022
File size is now reduced to 16682 bytes from 33364 bytes
A5.c Tue Apr 26 09:59:16 2022
File size is now reduced to 675 bytes from 1351 bytes
A3.c Tue Apr 26 09:59:16 2022
File size is now reduced to 275 bytes from 551 bytes
Ass5.c Tue Apr 26 09:59:16 2022
File size is now reduced to 160 bytes from 320 bytes
a3.c Tue Apr 26 09:59:16 2022
File size is now reduced to 254 bytes from 508 bytes
abc.txt Tue Apr 26 09:59:16 2022
File size is now reduced to 0 bytes from 0 bytes
assignment4.c Tue Apr 26 09:59:16 2022
File size is now reduced to 102 bytes from 204 bytes
assignment3.c Tue Apr 26 09:59:16 2022
File size is now reduced to 266 bytes from 533 bytes
kumkum-client@kumkumclient-VirtualBox:~/Desktop$