BVRIT HYDERABAD College Engineering for Women

(AUTONOMOUS)

(Approved by AICTE | Affiliated to JNTUH | Accredited by NAAC with Grade 'A' &NBA for CSE, ECE, EEE, & IT)

Bachupally, Hyderabad-500090

Department of CSE(Artificial Intelligence and Machine Learning)

OPERATING SYSTEM

Project name:

GUI(graphical user interface) for command line

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Problem statement

GUI lets a user interact with the device/system with the help of graphical elements, like windows, menus, icons, etc.The command line interface (CLI) and graphical user interface (GUI) are two different ways for users to interact with an operating system.

PROGRAM :

```
#include <ncurses.h>

#include <menu.h>

#define ARRAY_SIZE(a) (sizeof(a) / sizeof(a[0]))

char *choices[] = {

"Option 1",

"Option 2",

"Option 3",

"Exit"

};

void print_menu(WINDOW *menu_win, int highlight);

int main() {
```

```
initscr();

cbreak();

noecho();

keypad(stdscr, TRUE);

int n_choices = ARRAY_SIZE(choices);

ITEM **my_items = (ITEM **)calloc(n_choices + 1, sizeof(ITEM

*));

for (int i = 0; i < n_choices; ++i) {

my_items[i] = new_item(choices[i], "");

}

my_items[n_choices] = (ITEM *)NULL;

MENU *my_menu = new_menu((ITEM **)my_items);

WINDOW *menu_win = newwin(10, 40, 4, 4);

keypad(menu_win, TRUE);

set_menu_win(my_menu, menu_win);

set_menu_sub(my_menu, derwin(menu_win, 6, 38, 3, 1));

set_menu_mark(my_menu, " * ");
```

```
box(menu_win, 0, 0);

print_menu(menu_win, 1);

refresh();

int c;

while ((c = getch()) != KEY_F(1)) {

switch (c) {

case KEY_DOWN:menu_driver(my_menu, REQ_DOWN_ITEM);

break;

case KEY_UP:

menu_driver(my_menu, REQ_UP_ITEM);

break;

case 10: /* Enter */

{

ITEM *cur = current_item(my_menu);

mvprintw(23, 0, "Selected: %s", item_name(cur));

pos_menu_cursor(my_menu);

if (strcmp(item_name(cur), "Exit") == 0)
```

```
goto end;
}
break;
}
wrefresh(menu_win);
}end:
unpost_menu(my_menu);
free_menu(my_menu);
for (int i = 0; i < n_choices; ++i)
free_item(my_items[i]);
endwin();
return 0;
}
void print_menu(WINDOW *menu_win, int highlight) {
int x, y, i;
x = 2;
y = 2;
```

```
box(menu_win, 0, 0);

for (i = 0; i < ARRAY_SIZE(choices); ++i) {

if (highlight == i + 1) {

wattron(menu_win, A_REVERSE);

mvwprintw(menu_win, y, x, "%s", choices[i]);wattroff(menu_win,

A_REVERSE);

} else

mvwprintw(menu_win, y, x, "%s", choices[i]);

++y;

}

wrefresh(menu_win);

}
```

OUTPUT :