**BVRIT HYDERABAD College of Engineering for Women**

**(UGC-Autonomous)**

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**Department of Artificial Intelligence & Machine Learning**

**Subject: Operating Systems**

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**CASE STUDY ON:**

**GUI(graphical user interface) for command line**

# 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:

