



CECS 3234-80
Unix Operating Systems
SP - 22

Project 2: La Loteria Electronica (Perl, AWK and
Zenity)

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April 26,2022

1 Description

In this homework the student had to run a bash script on a terminal using AWK and Zenity GUI features. The virtual firmware used was VirtualBox. In this problem the student had to create a lottery system. Zenity is free software and a cross-platform program that allows the execution of GTK dialog boxes in command-line and shell scripts. Zenity allows easy creation of GUIs, though it has fewer features than more complex GUI-creation tools. The lottery system will have the options "Pega 3", "Pega 4", "Power Ball", "Loto", "Revancha", y "Ver Log Files". After choosing lottery option, you can choose between the numbers being chosen manually by the user, or randomly.

The script was the following:

```
1
2 #!/bin/bash
3
4 clear
5 while [ 'Exit' != op ]; do
6 clear;
7 op=$(zenity --list --text="Loteria Electronica" --width 320 --height 280 --radiolist --
      column="Escoge" --column="Opciones" TRUE "Pega 3" FALSE "Pega 4" FALSE "Power Ball"
      FALSE "Loto" FALSE "Revancha" FALSE "Ver Log Files" FALSE "Exit")
8 case $op in
9
10 "Pega 3")
11     sec=$(zenity --list --text="Menu" --width 220 --height 200 --radiolist --column="Escoge
12 " --column="Opciones" TRUE "Escoger Numeros" FALSE "Automatica" )
13     rand=$(awk 'BEGIN {for(i=1;i<=1;i++) print int(10*rand()) int(10*rand()) int(10*rand())
14 }')
15
16     if [ "$sec" == "Escoger Numeros" ] ; then
17         for((i=0;i<=2;i++)) ; do
18             bag1[$i]=$(zenity --scale --text "Escoge un numero" --min-value=1 --max-value=9 --value
19 =1)
20         done
21         zenity --info --text "Numeros escogidos: ${bag1[*]} \n Numeros ganadores: $rand" --
22 width 100 --height 100
23
24         if [ "${bag1[*]}" == "$rand" ] ; then
25             zenity --info --text "Congratulations!" --width --height 100
26         fi
27
28         if [ "${bag1[*]}" != "$rand" ] ; then
29             zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
30         fi
31
32         if [ "$sec" == "Automatica" ]; then
33             num=$(awk 'BEGIN { $rand() ; for(i=1;i<=1;i++) print int(10*rand()) int(10*rand()) int
34 (10*rand()) }')
35             zenity --info --text "Numeros entrados: $num \nNumeros ganadores: $rand " --width 100
36 --height 100
37
38             if [ "$num" == "$rand" ] ; then
39                 zenity --info --text "Felicidades!" --width 100 --height 100
40             fi
41
42             if [ "$num" != "$rand" ] ; then
43                 zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
44             fi
45         fi
46
47         used1=$((used1 + 1 | bc))
48         ;;
49
50 "Pega 4")
51     sec=$(zenity --list --text="Menu" --width 220 --height 200 --radiolist --column="Escoge
52 " --column="Opciones" TRUE "Escoger Numeros" FALSE "Automatica" )
```

```
48 rand=$(awk 'BEGIN {for(i=1;i<=1;i++) print int(10*rand()) int(10*rand()) int(10*rand())
49 int(10*rand()) }')
50 if [ "$sec" == "Escoger Numeros" ] ; then
51 for((i=0;i<=3;i++)) ; do
52 bag2[$i]=$(zenity --scale --text "Escoge un numero" --min-value=1 --max-value=9 --value
53 =1)
54 done
55 zenity --info --text "Numeros escogidos: ${bag2[*]} \n Numeros ganadores: $rand" --
56 width 100 --height 100
57
58 if [ "${bag2[*]}" == "$rand" ] ; then
59 zenity --info --text "Congratulations!" --width --height 100
60 fi
61
62 if [ "${bag2[*]}" != "$rand" ] ; then
63 zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
64 fi
65 fi
66
67 if [ "$sec" == "Automatica" ] ; then
68 num=$(awk 'BEGIN { $rand() ; for(i=1;i<=1;i++) print int(10*rand()) int(10*rand()) int
69 (10*rand()) int(10*rand()) }')
70 zenity --info --text "Numeros entrados: $num \nNumeros ganadores: $rand " --width 100
71 --height 100
72
73 if [ "$num" == "$rand" ] ; then
74 zenity --info --text "Felicidades!" --width 100 --height 100
75 fi
76
77 if [ "$num" != "$rand" ] ; then
78 zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
79 fi
80 fi
81
82 used2=$((used2 + 1 | bc))
83 ;;
84
85 "Power Ball")
86 sec=$(zenity --list --text="Menu" --width 220 --height 200 --radiolist --column="Escoge
87 " --column="Opciones" TRUE "Escoger Numeros" FALSE "Automatica" )
88 rand=$(awk 'BEGIN {for(i=1;i<=1;i++) print int(70*rand()) int(70*rand()) int(70*rand()
89 ) int(70*rand()) int(70*rand()) int(27*rand())}')
90
91 if [ "$sec" == "Escoger Numeros" ] ; then
92 for((i=0;i<=4;i++)) ; do
93 bag3[$i]=$(zenity --scale --text "Escoge un numero" --min-value=1 --max-value=69 --
94 value=1)
95 done
96 bag3[${#bag3[@]}]=$(zenity --scale --text "Escoge numero para bola roja" --min-value=1
97 --max-value=26 --value=1)
98 zenity --info --text "Numeros escogidos: ${bag3[*]} \n Numeros ganadores: $rand" --
99 width 100 --height 100
100
101 if [ "${bag3[*]}" == "$rand" ] ; then
102 zenity --info --text "Congratulations!" --width --height 100
103 fi
104
105 if [ "${bag3[*]}" != "$rand" ] ; then
106 zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
107 fi
108 fi
109
110 if [ "$sec" == "Automatica" ] ; then
111 num=$(awk 'BEGIN { $rand() ; for(i=1;i<=1;i++) print int(70*rand()) int(70*rand()) int
112 (70*rand()) int(70*rand()) int(70*rand()) int(27*rand()) }')
113 zenity --info --text "Numeros entrados: $num \nNumeros ganadores: $rand " --width 100
114
```

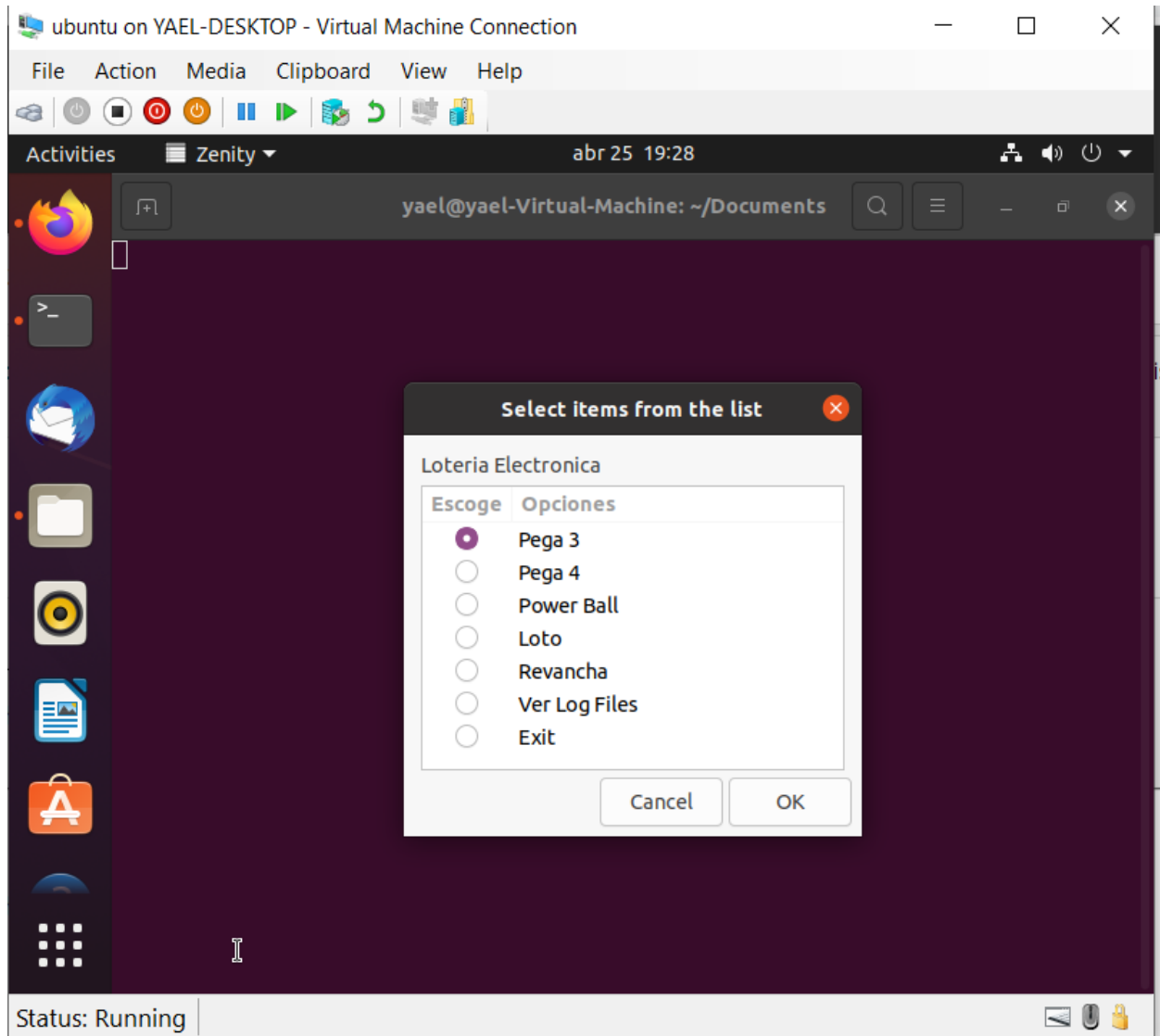
```
--height 100

105
106     if [ "$num" == "$rand" ] ; then
107         zenity --info --text "Felicidades!" --width 100 --height 100
108     fi
109     if [ "$num" != "$rand" ] ; then
110         zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
111     fi
112 fi
113
114     used3=$((used3 + 1 | bc))
115 ;;
116
117 "Loto")
118     sec=$(zenity --list --text="Menu" --width 220 --height 200 --radiolist --column="Escoge
" --column="Opciones" TRUE "Escoger Numeros" FALSE "Automatica" )
119     rand=$(awk 'BEGIN {for(i=1;i<=1;i++) print int(36*rand()) int(36*rand()) int(36*rand())
) int(36*rand()) int(36*rand()) int(11*rand())}')
120
121     if [ "$sec" == "Escoger Numeros" ] ; then
122         for((i=0;i<=4;i++)) ; do
123             bag4[$i]=$(zenity --scale --text "Escoge un numero" --min-value=1 --max-value=35 --
value=1)
124         done
125         bag4[${#bag4[@]}]=$(zenity --scale --text "Escoge numero para bola roja" --min-value=1
--max-value=10 --value=1)
126         zenity --info --text "Numeros escogidos: ${bag4[*]} \n Numeros ganadores: $rand" --
width 100 --height 100
127
128         if [ "${bag4[*]}" == "$rand" ] ; then
129             zenity --info --text "Congratulations!" --width --height 100
130         fi
131
132         if [ "${bag4[*]}" != "$rand" ] ; then
133             zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
134         fi
135     fi
136
137     if [ "$sec" == "Automatica" ] ; then
138         num=$(awk 'BEGIN { $rand() ; for(i=1;i<=1;i++) print int(36*rand()) int(36*rand()) int
(36*rand()) int(36*rand()) int(36*rand()) int(11*rand()) }')
139         zenity --info --text "Numeros entrados: $num \nNumeros ganadores: $rand " --width 100
--height 100
140
141         if [ "$num" == "$rand" ] ; then
142             zenity --info --text "Felicidades!" --width 100 --height 100
143         fi
144         if [ "$num" != "$rand" ] ; then
145             zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
146         fi
147     fi
148
149     used4=$((used4 + 1 | bc))
150 ;;
151
152 "Revancha")
153     sec=$(zenity --list --text="Menu" --width 220 --height 200 --radiolist --column="Escoge
" --column="Opciones" TRUE "Escoger Numeros" FALSE "Automatica" )
154     rand=$(awk 'BEGIN {for(i=1;i<=1;i++) print int(36*rand()) int(36*rand()) int(36*rand())
) int(36*rand()) int(36*rand()) int(11*rand())}')
155
156     if [ "$sec" == "Escoger Numeros" ] ; then
157         for((i=0;i<=4;i++)) ; do
158             bag5[$i]=$(zenity --scale --text "Escoge un numero" --min-value=1 --max-value=35 --
value=1)
159         done
160         bag5[${#bag5[@]}]=$(zenity --scale --text "Escoge numero para bola roja" --min-value=1
161
```

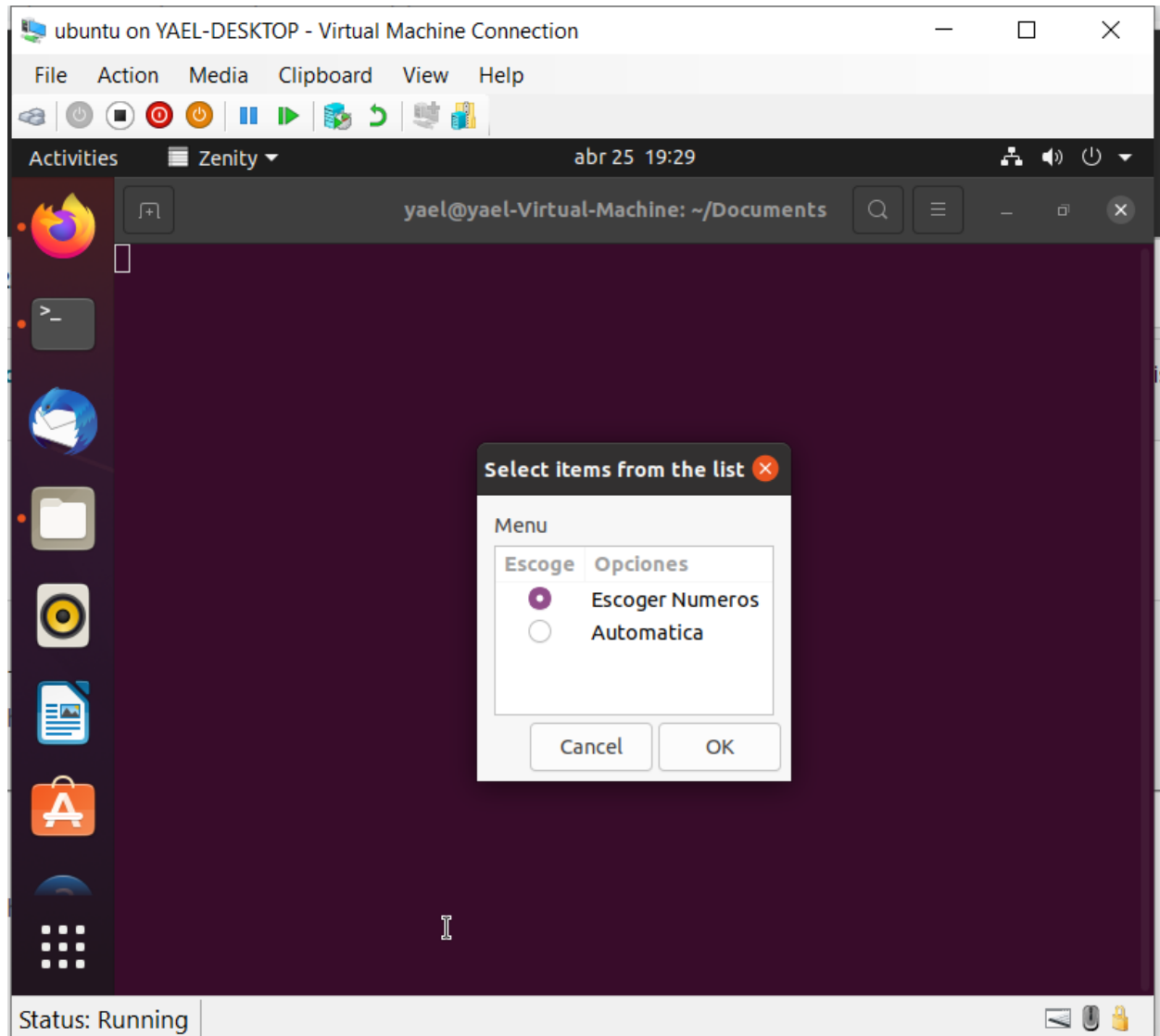
```
162 --max-value=10 --value=1)
163 zenity --info --text "Numeros escogidos: ${bag5[*]} \n Numeros ganadores: $rand" --
164 width 100 --height 100
165
166 if [ "${bag5[*]}" == "$rand" ] ; then
167 zenity --info --text "Congratulations!" --width --height 100
168 fi
169
170 if [ "${bag5[*]}" != "$rand" ] ; then
171 zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
172 fi
173
174 if [ "$sec" == "Automatica" ] ; then
175 num=$(awk 'BEGIN { $rand() ; for(i=1;i<=1;i++) print int(36*$rand()) int(36*$rand()) int
176 (36*$rand()) int(36*$rand()) int(36*$rand()) int(11*$rand()) }')
177 zenity --info --text "Numeros entrados: $num \nNumeros ganadores: $rand " --width 100
178 --height 100
179
180 if [ "$num" == "$rand" ] ; then
181 zenity --info --text "Felicidades!" --width 100 --height 100
182 fi
183
184 if [ "$num" != "$rand" ] ; then
185 zenity --info --text "No gano. \nIntente de nuevo." --width 100 --height 100
186 fi
187
188 used5=$(( $used5 + 1 | bc ))
189 ;;
190
191 "Ver Log Files")
192 temp=$(cat temp) ; count=$((count+1)); echo "$count">temp | zenity --info --text "
193 Cantidad de veces que el programa a corrido: $temp " --width 200 --height 100
194 zenity --info --text "Log Files" --width 100 --height 100
195 zenity --info --text "Pega 3 ----- $used1" --width 200 --height 100
196 zenity --info --text "Pega 4 ----- $used2" --width 200 --height 100
197 zenity --info --text "Power Ball ----- $used3" --width 200 --height 100
198 zenity --info --text "Loto ----- $used4" --width 200 --height 100
199 zenity --info --text "Revancha ----- $used5" --width 200 --height 100
200 ;;
201
202 "Exit")
203 zenity --info --text "Gracias por usar La Loteria Electronica" --width 200 --height 100
204 ; exit
205 ;;
206
207 esac
208 done
```

Listing 1: Loteria SCRIPT

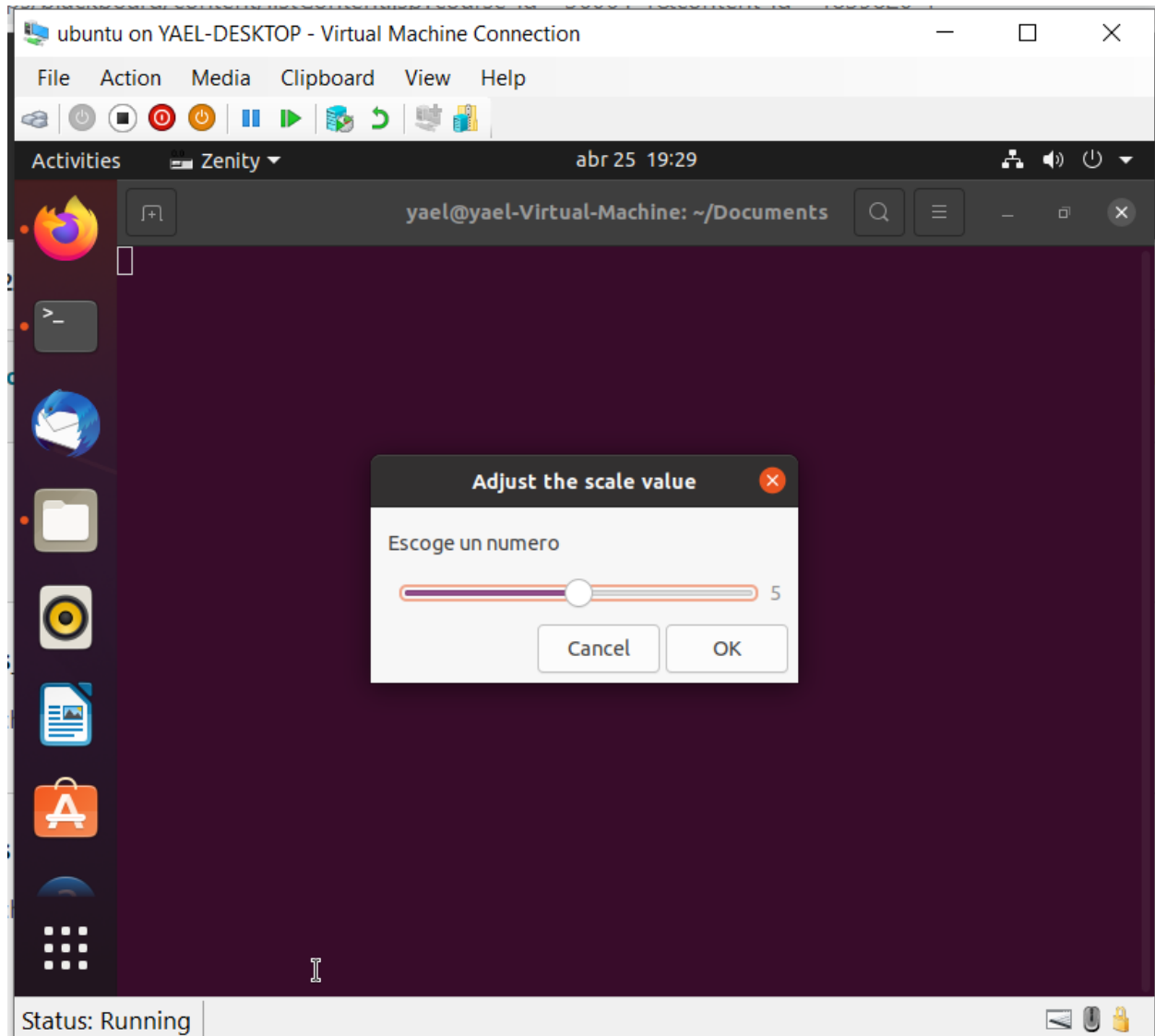
Pictures of the script running below:



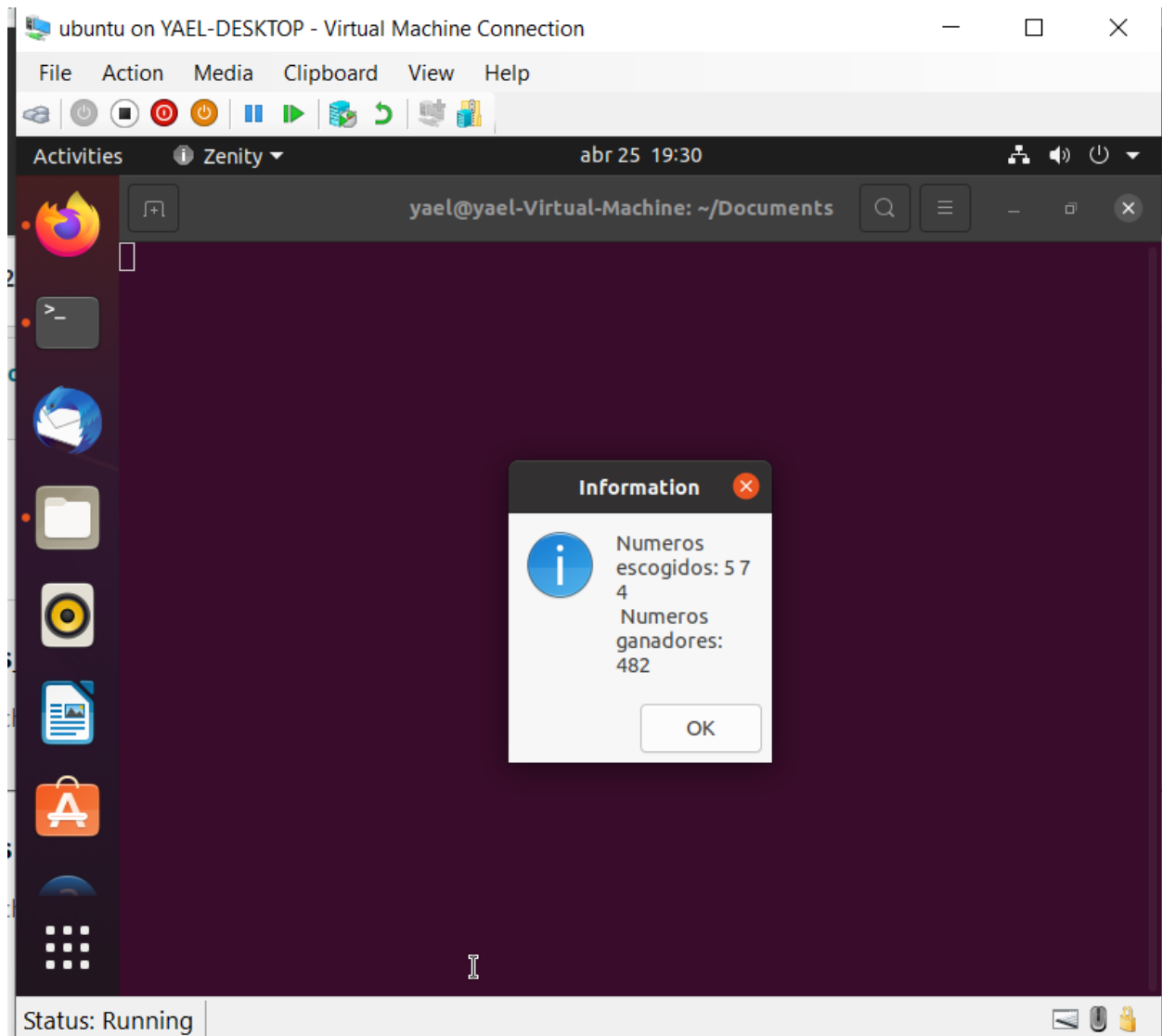
Loteria Menu



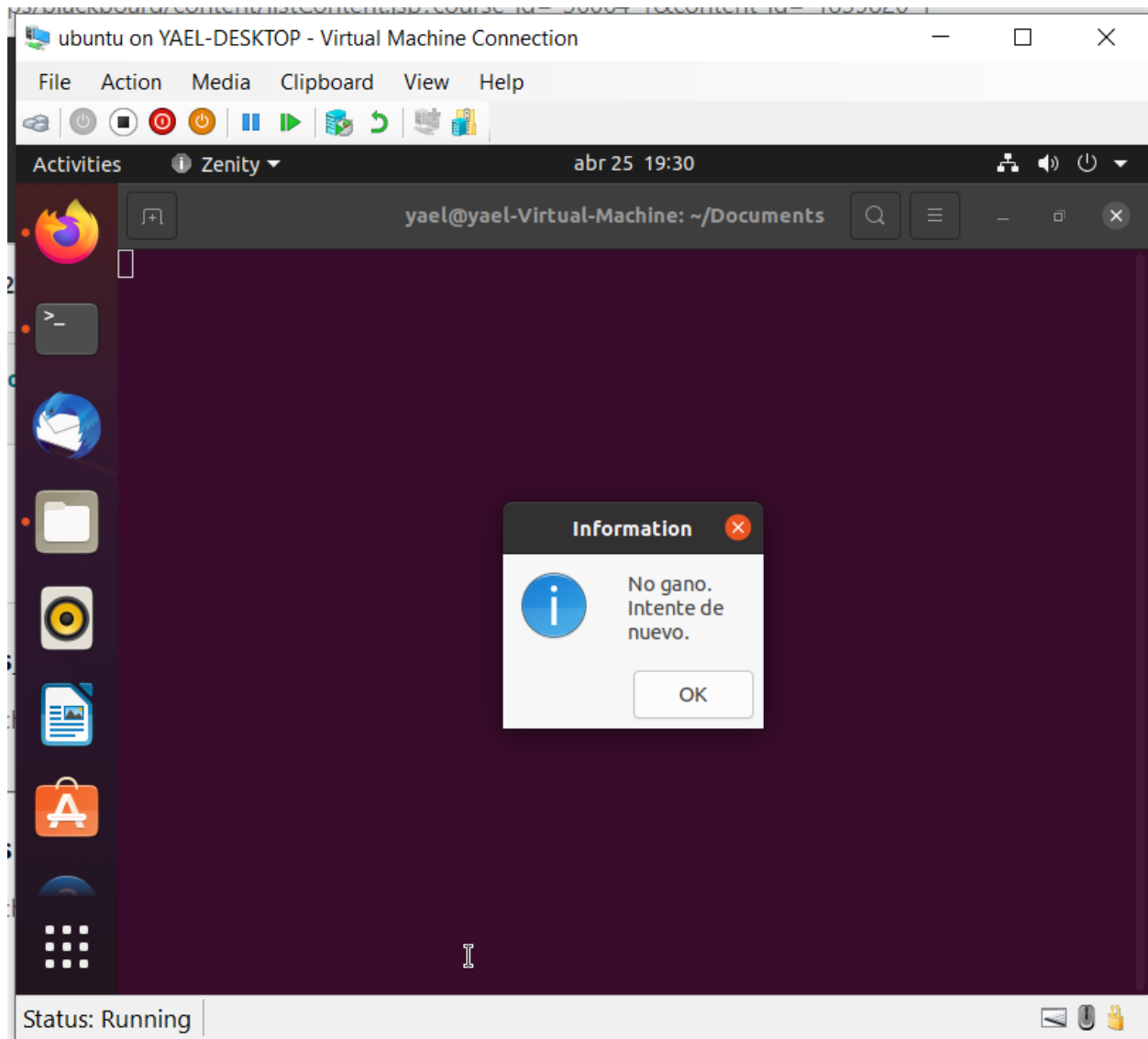
Escoger numeros option



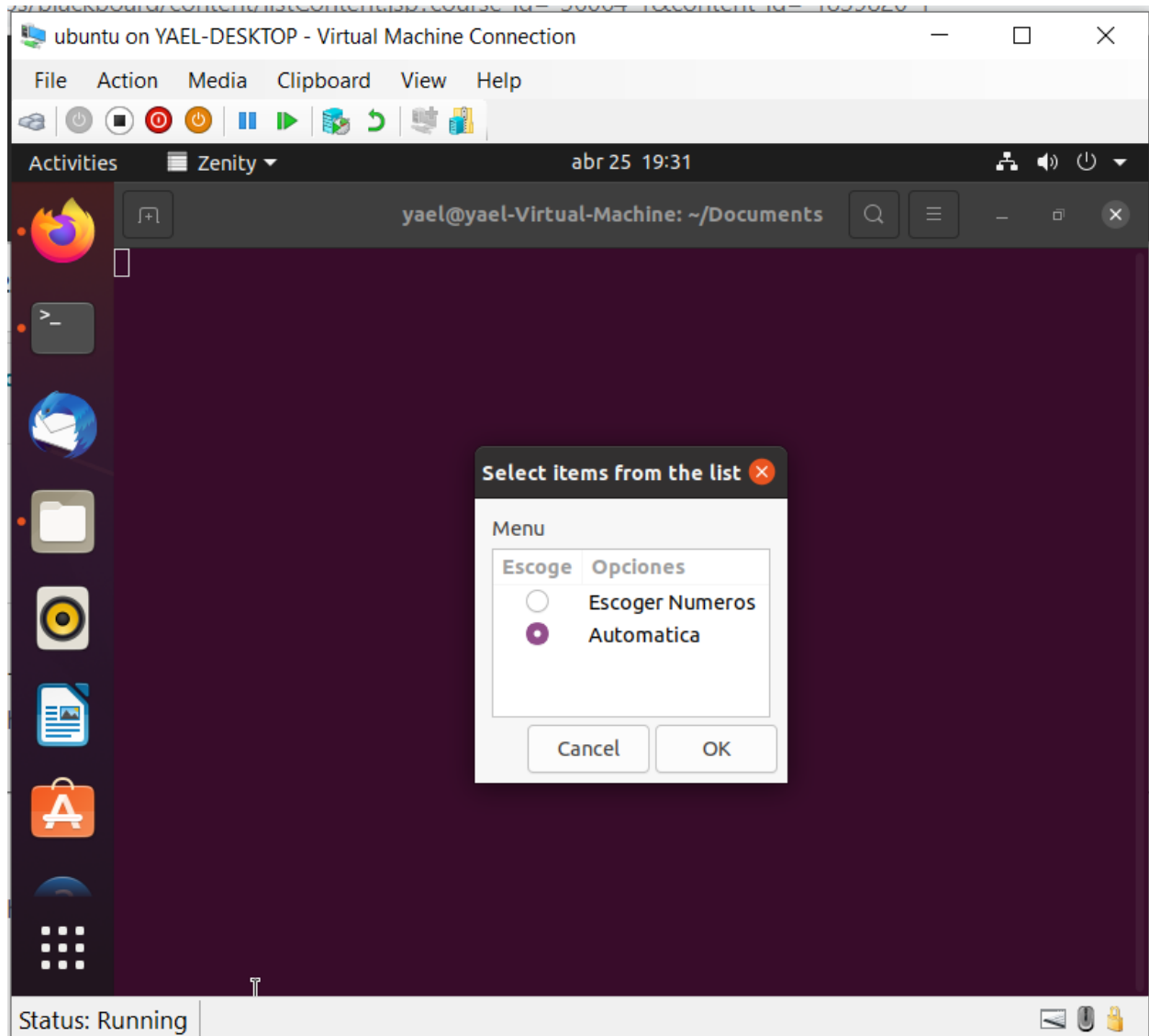
Escoger numeros option



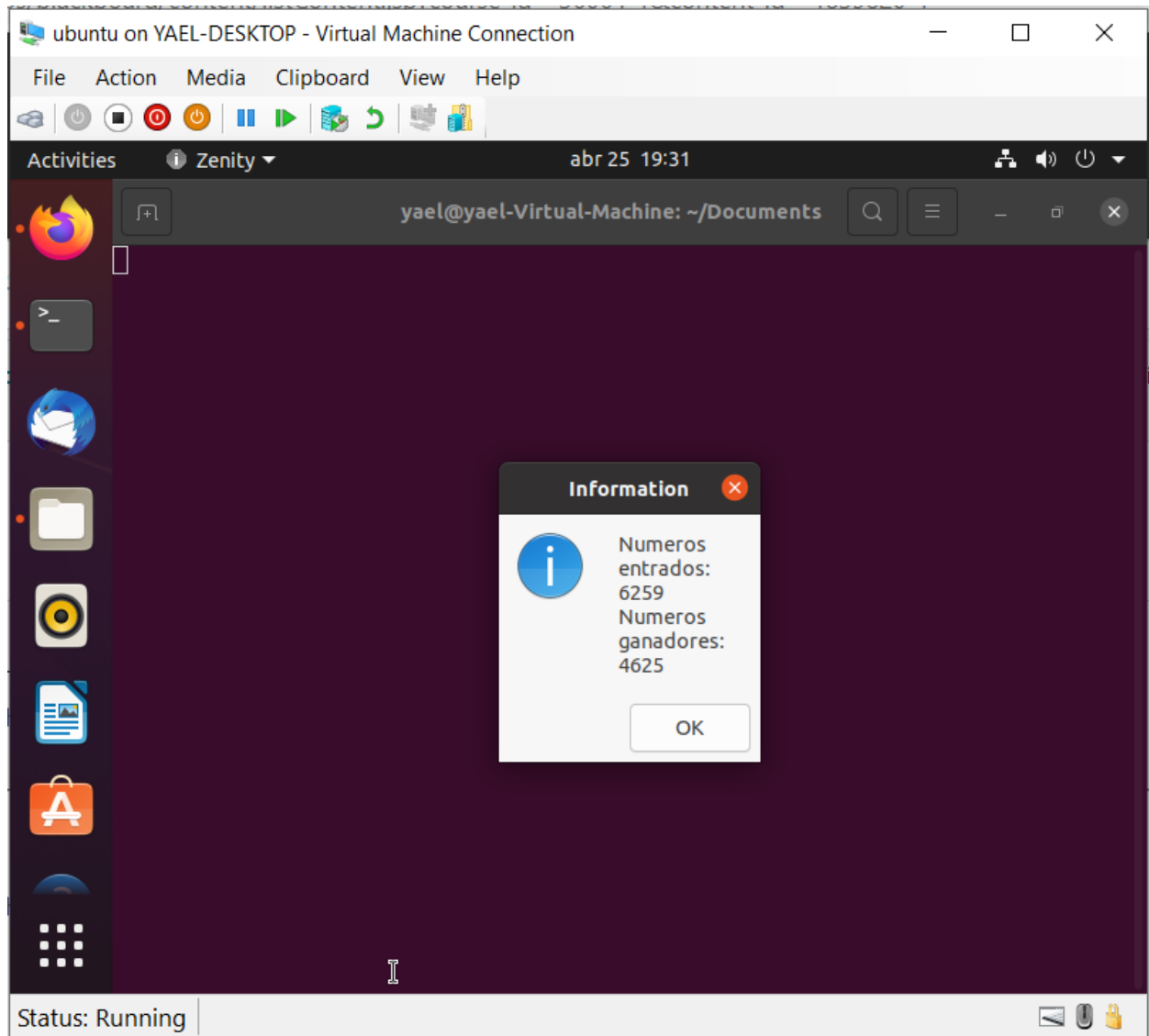
Numbers chosen and winning numbers



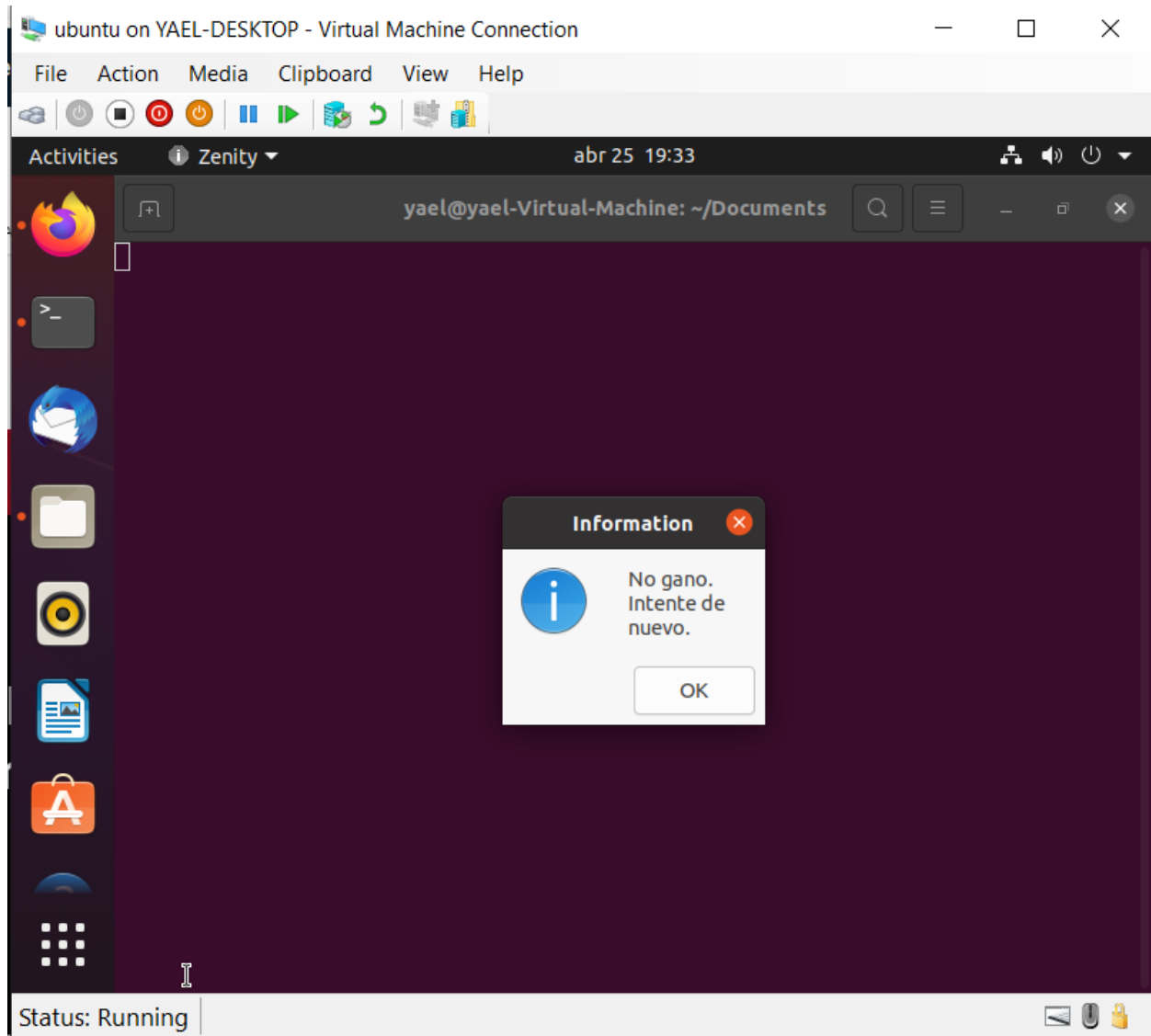
No Win Announcement



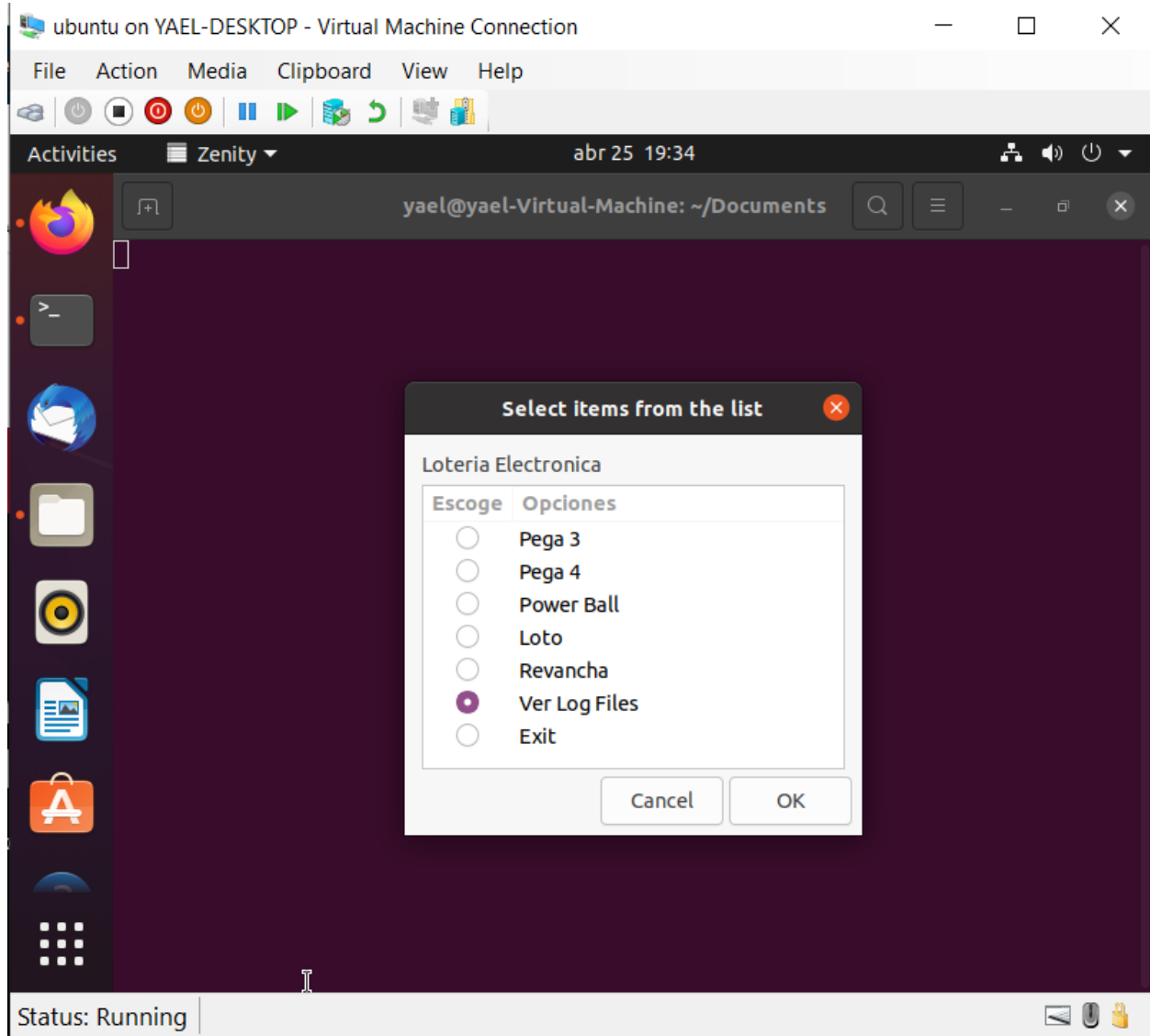
Automatica option of Pega 4



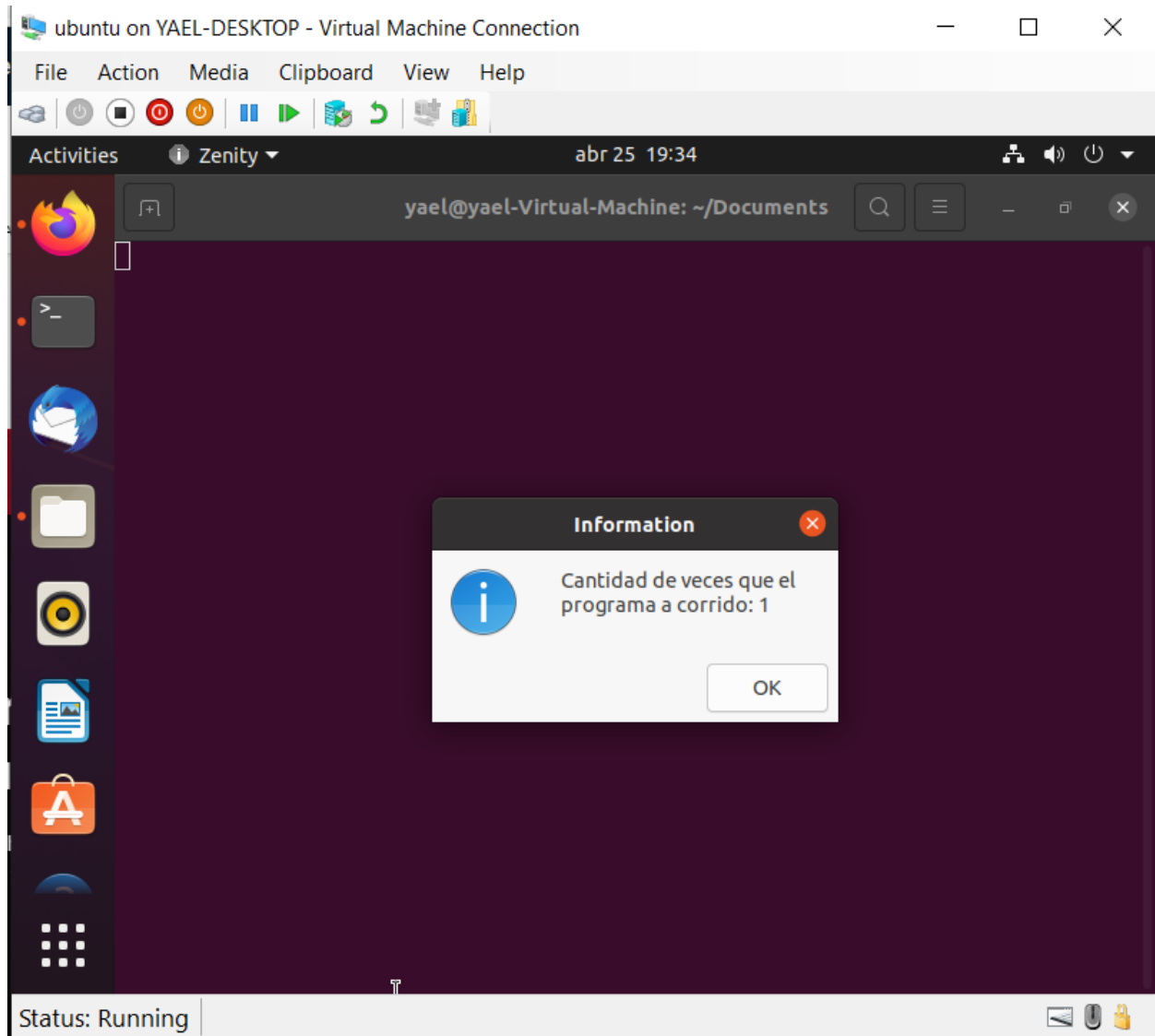
Numbers chosen and winning numbers of Automatic Pega 4



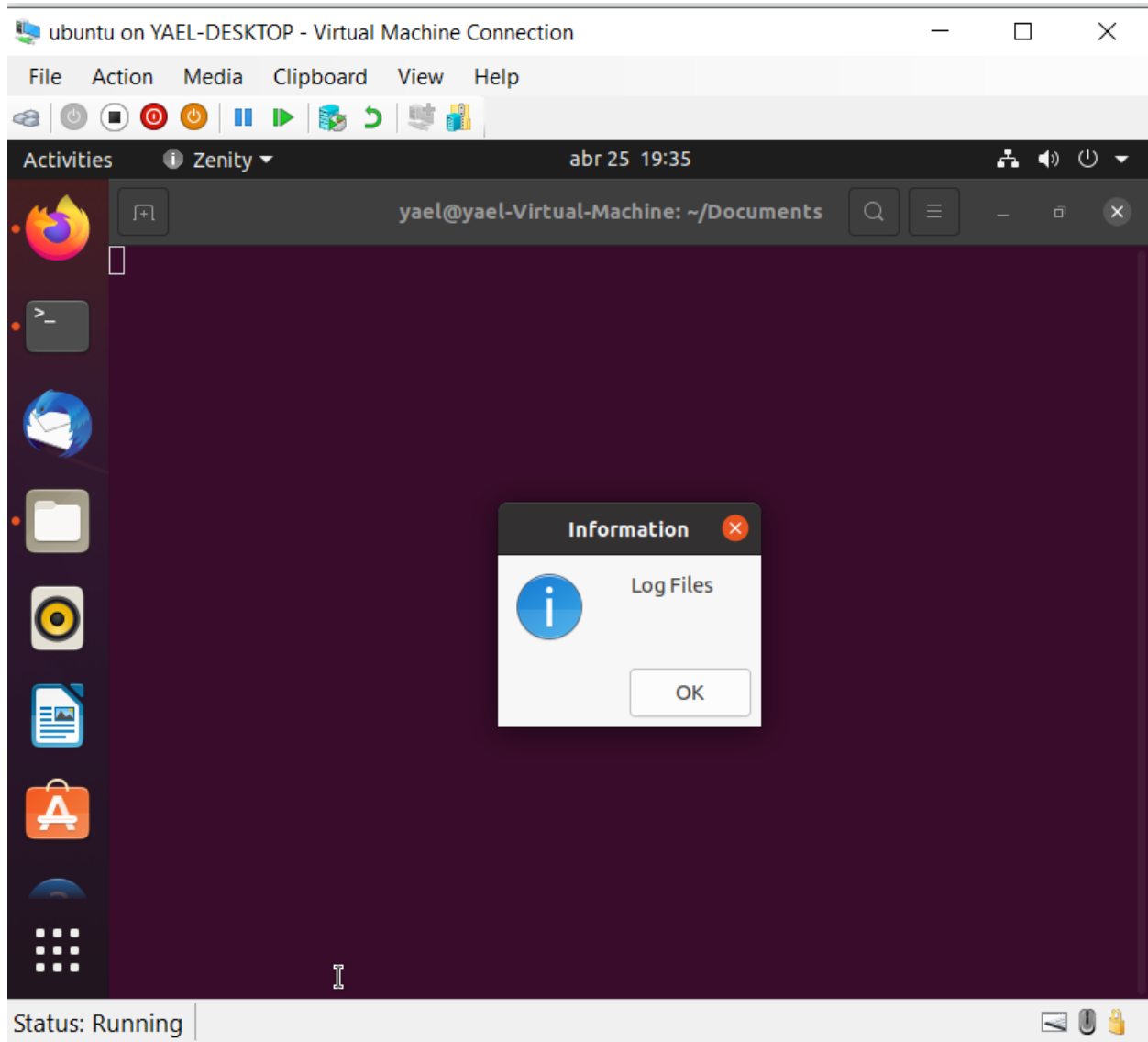
No Win Announcement



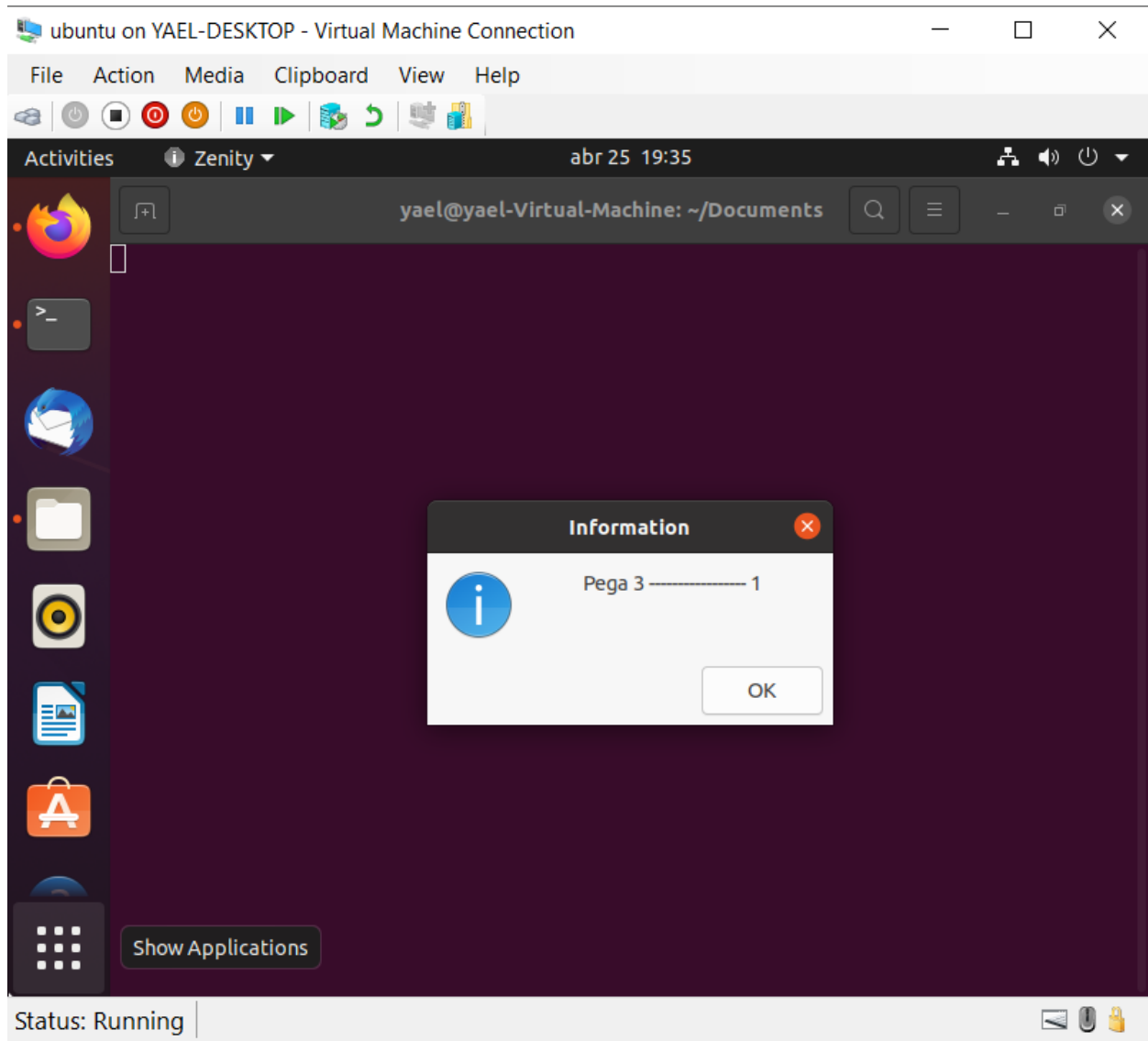
Ver Log Files Option



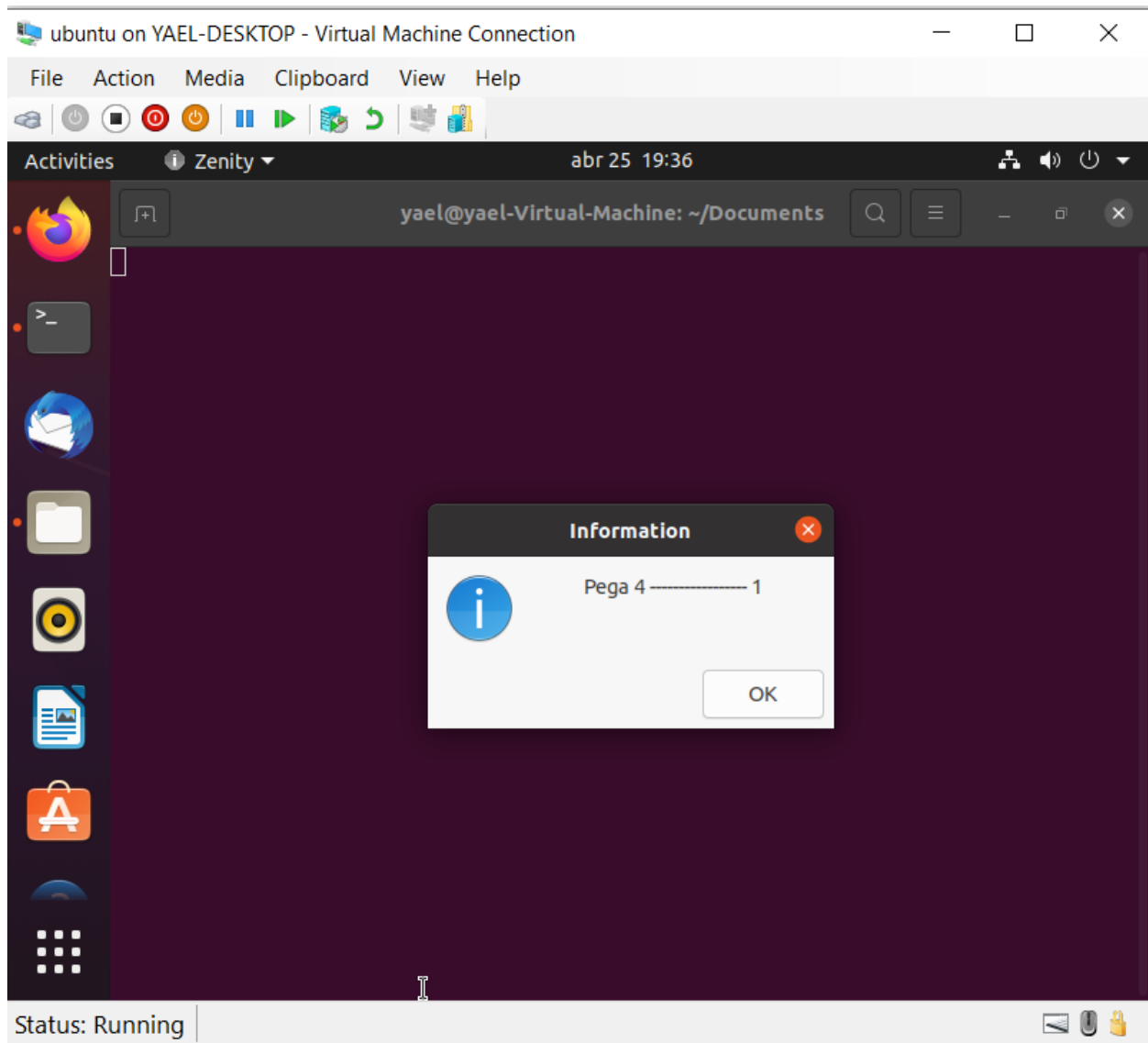
Ver Log Files Option Execution 1/7



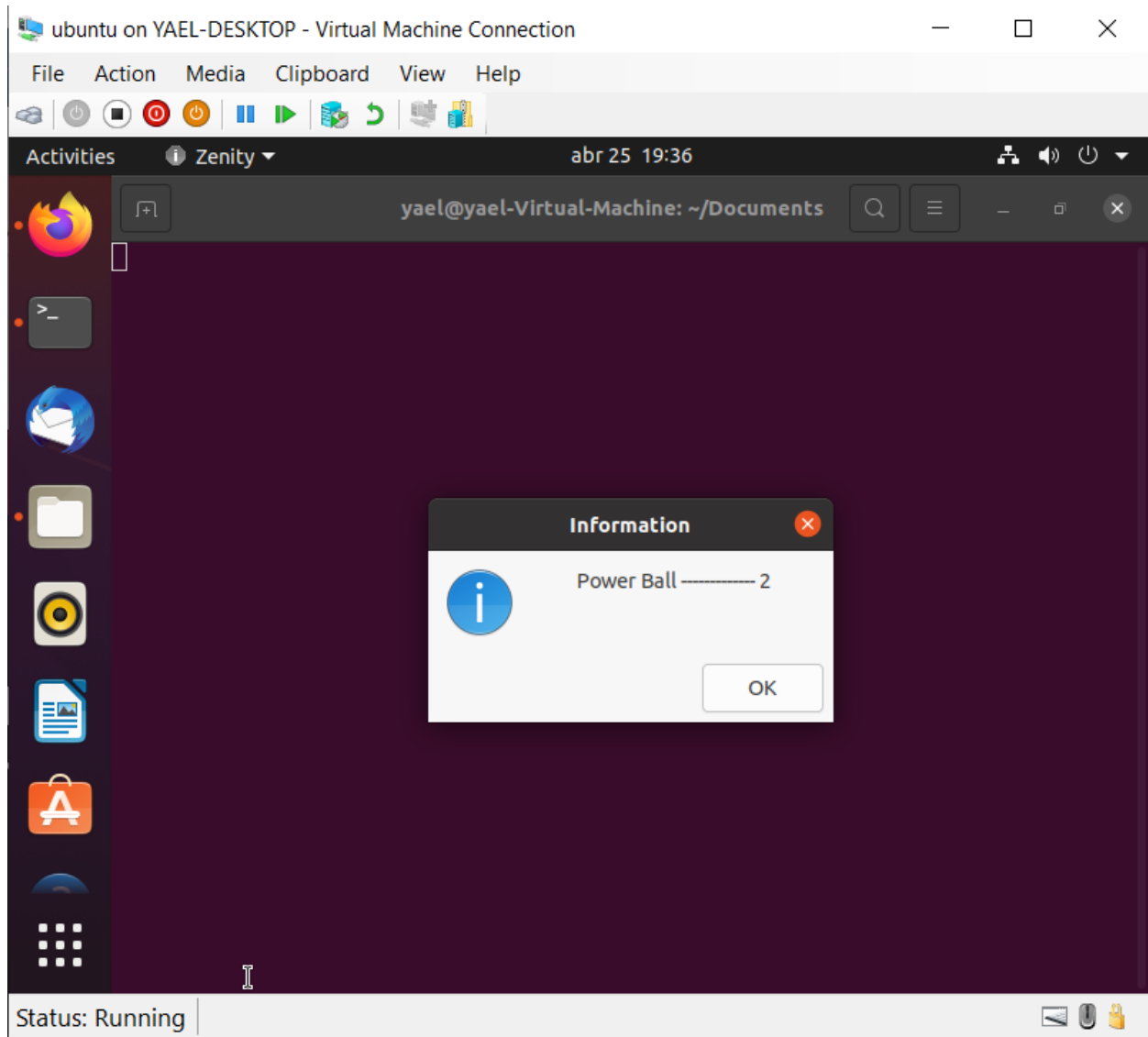
Ver Log Files Option Execution 2/7



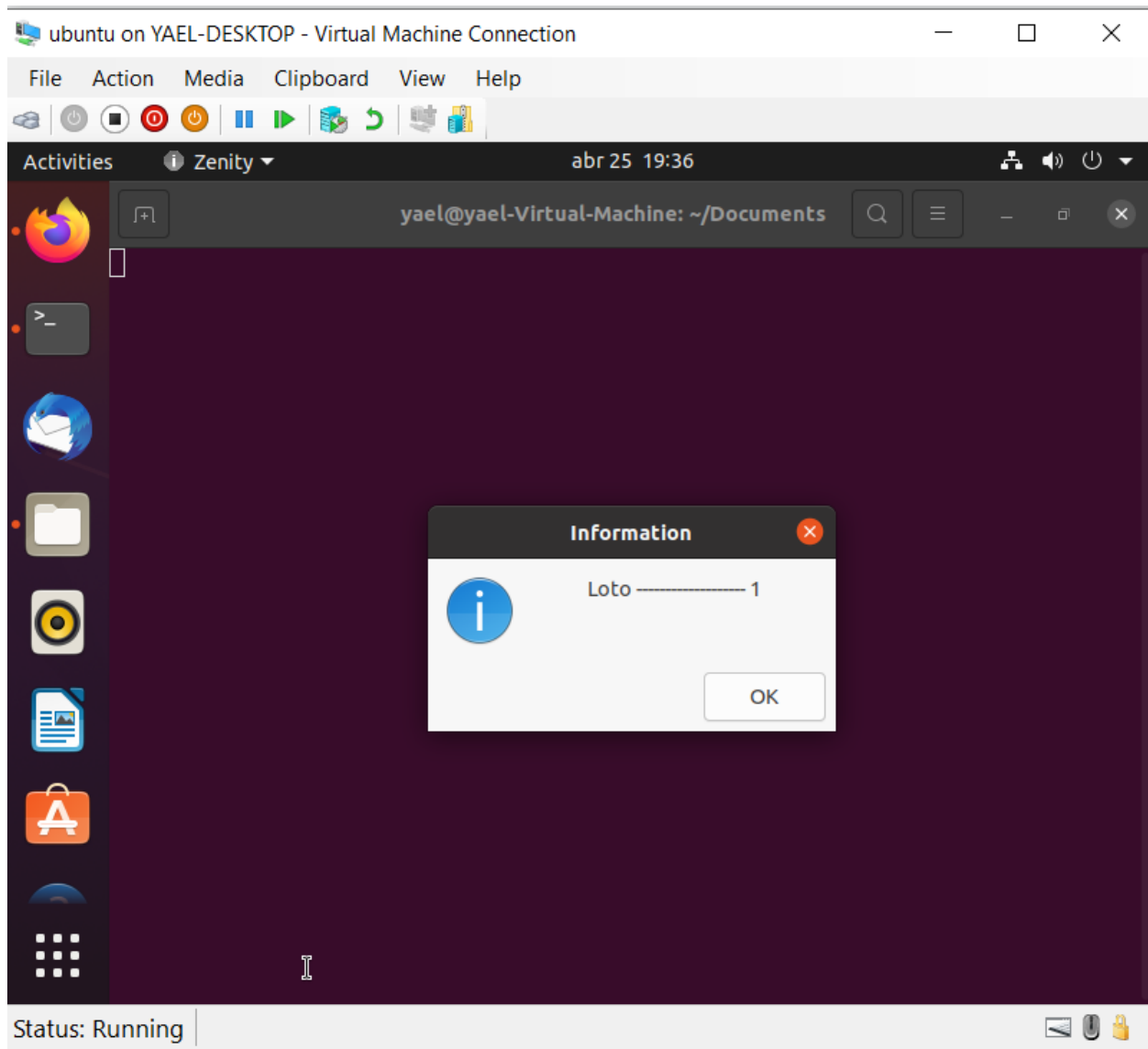
Ver Log Files Option Execution 3/7: Times Pega 3 has been runned



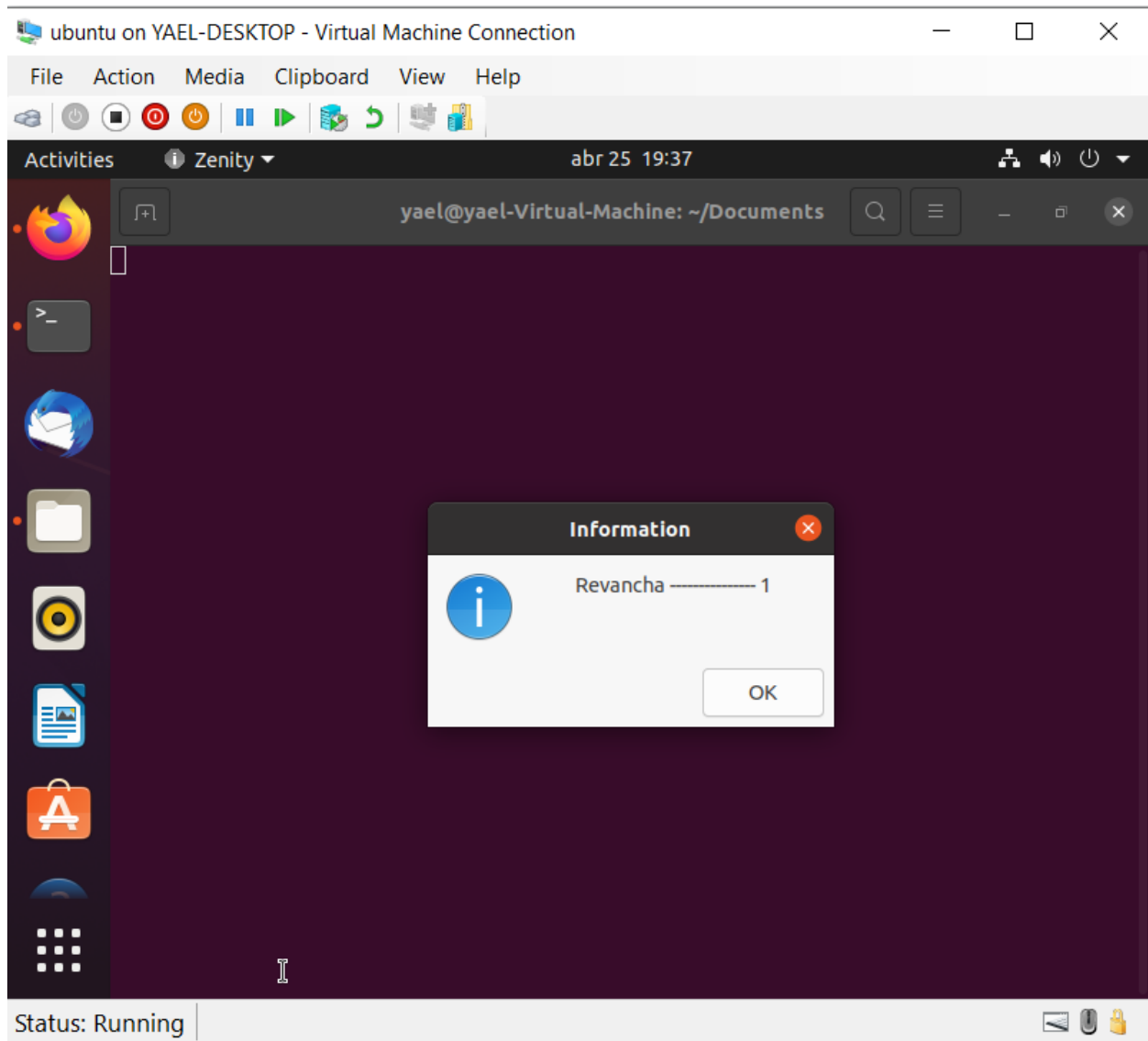
Ver Log Files Option Execution 4/7: Times Pega 4 has been runned



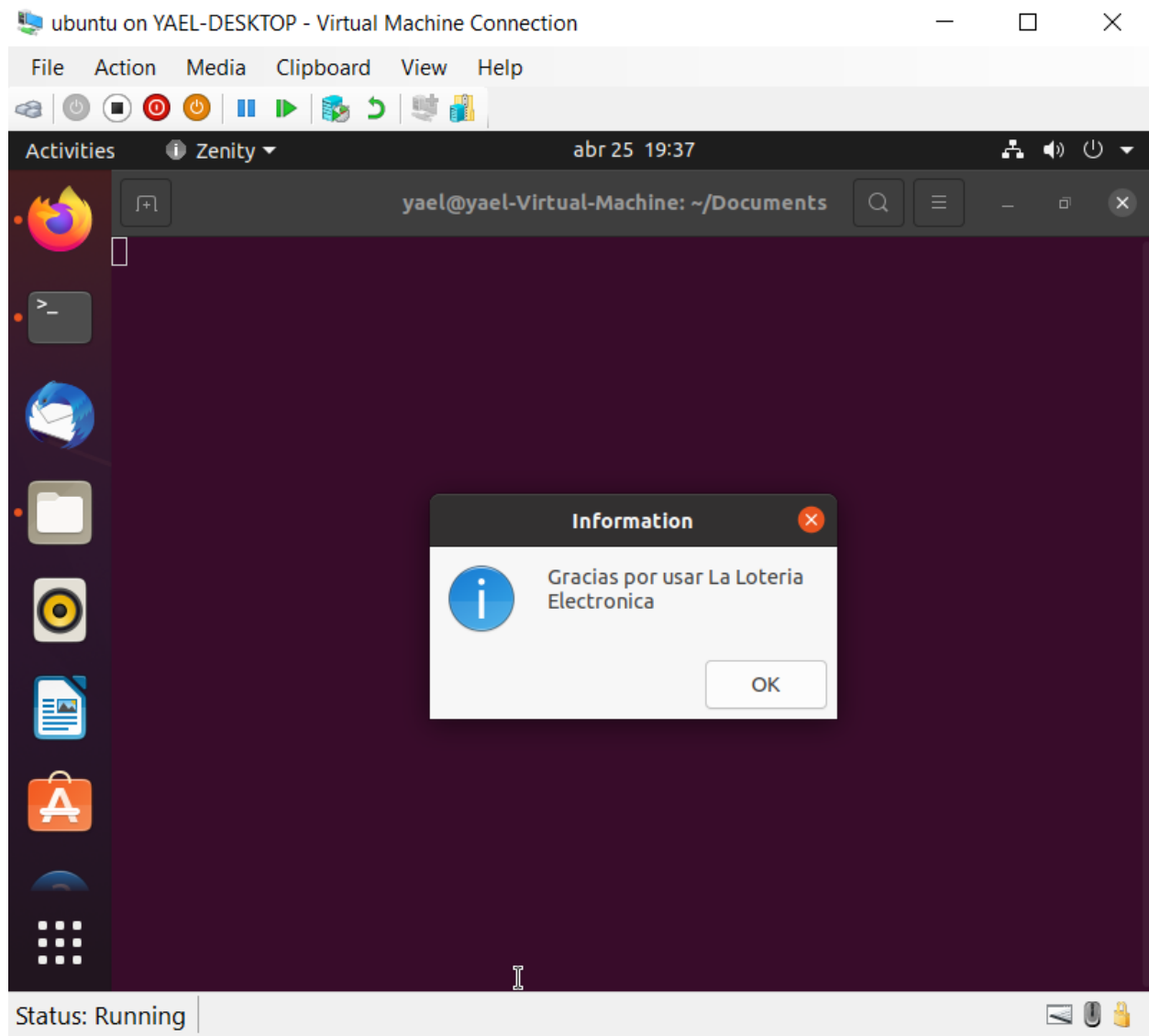
Ver Log Files Option Execution 5/7: Times PowerBall has been runned



Ver Log Files Option Execution 6/7: Times Loto has been runned



Ver Log Files Option Execution 7/7: Times Revancha has been runned



Exit Execution message