

PREPARATION TASKS FOR PRACS ON THE RASPBERRY PI

A) How to connect to the UWC VPN on Ubuntu

1. Visit the the following link (<https://iamuwc.uwc.ac.za/>), to access guidelines on how to set up the VPN. Everything is explained on this website.
2. You will be asked to install the VPN software through the terminal.
3. After installation, use your Ikamva credentials (**Username** and **Password**) to connect to the VPN.

B) How to log in to the Raspberry Pis using ssh on Ubuntu

1. Open a new terminal on Ubuntu (Please leave the first terminal open).
2. Type the following command: **ssh -X [cnyirenda@172.21.5.XXX](#)**
(Replace **cnyirenda** with your *userID* for Sun Lab; Use your allocated IP Address in the attached document starting from page 2)
3. When you are asked the following: “Are you sure you want to continue connecting (yes/no)?”, Enter **yes**.
4. Enter your **Password** for Sun Lab.
5. Create a new directory and use your user ID as its name: **mkdir cnyirenda** (Replace *cnyirenda* with your *userID*)
6. Create your first Raspberry Pi Assembler file and name it *first.s* by using a text editor (In this case, we use *nano*) by using the following command at the Raspberry Pi prompt: **nano first.s**
7. Paste the following code in the ensuing window:

```
/* -- first.s */
/* This is a comment */
.global main /* entry point must be global */
.func main /* This is main */
/* 'main' is a function */
main:
mov r0, #2 /* Put a 2 into register r0 */
bx lr /* Return from main */
```

8. Save the code by pressing **Control+O**
9. Close the editor by pressing **Control+X**
10. Assemble *first.s* by using the following command: **as -o first.o first.s**
11. Create an executable binary file *first.s* by using the following command:
gcc -o first first.o
12. Run your binary file by using the following command: **./first** (This seems do nothing)
13. Run the binary file in this format: **./first ; echo \$?** (This will give an output of 2).

CSC 212 S2 2020 RASPBERRY PI IP ADDRESS ALLOCATION

#	NAME	USER_ID	HOST NAME	IP ADDRESS
1	ABRAHAMS, MUJAAHID	3950547	cspl	172.21.5.221
2	ADAM, ABDULLAH IDREES	3935415	cspl	172.21.5.221
3	ADAMS, IMRAAN	3941889	cspl	172.21.5.221
4	ADAMS, ZAYAAN	3852000	cspl	172.21.5.221
5	ARENDSE, MATTHEW ROBIN	3956525	cspl	172.21.5.221
6	ARRIES, ROBYN ASHLEIGH	3820396	cspl	172.21.5.221
7	BALENI, SIVUYILE	3836580	cspl	172.21.5.221
8	BOMVANA, MIHLALI	3647891	cspl	172.21.5.221
9	BRUCE, KEAGAN	3930303	cspl	172.21.5.221
10	BRUWER, GARRIN NATHAN	3933122	cspl	172.21.5.221
11	BUKANI, SANGE	3941271	cspl	172.21.5.221
12	CISHE, ANATHI	3647500	cspl	172.21.5.221
13	CLAASEN, LEIGH	3917531	cspl	172.21.5.221
14	CRONJE, WIEDAAD	3971380	cspl	172.21.5.221
15	DAMON, MOEGAMMAD SHUAI	3967021	cspl2	172.21.5.223
16	DARIES, DEVON	3952783	cspl2	172.21.5.223
17	DARIUS, MEEKAA-EEL	3937597	cspl2	172.21.5.223
18	DLISANI, YONELA	3723412	cspl2	172.21.5.223
19	DUKWANA, LIHLE	3567724	cspl2	172.21.5.223
20	DYAKOPO, DENEEO	3762601	cspl2	172.21.5.223
21	DYANTYI, PHILA	3647826	cspl2	172.21.5.223
22	DZANIBE, ZIYANDA VIWE	3755766	cspl2	172.21.5.223
23	FANA, SIVUYILE	3737777	cspl2	172.21.5.223
24	FATSHA, IDE	3844891	cspl2	172.21.5.223
25	FAURE, KEENAN	3959394	cspl2	172.21.5.223
26	FIYO, MALWANDE	3566785	cspl2	172.21.5.223
27	FLATELA, SISIPHO LIZIWE	3834263	cspl2	172.21.5.223
28	FOFLONKER, AMINA	3843553	cspl2	172.21.5.223
29	FOSE, ATHENKOSI ADVOCATE	3857341	cspl3	172.21.5.219
30	GAMIELDIEN, SAADIQAH	3934825	cspl3	172.21.5.219
31	GASANT, MUJAHID	3934330	cspl3	172.21.5.219
32	GUBANGXA, RICHARD	3949795	cspl3	172.21.5.219
33	GWABENI, DINISO	3949632	cspl3	172.21.5.219
34	HANSLO, MOHAMMED NASR	3570680	cspl3	172.21.5.219
35	HANSLO, MOHAMMED RIYAD	3570672	cspl3	172.21.5.219
36	HATTINGH, GARTH EDWARD	3513398	cspl3	172.21.5.219
37	HENDRICKS, JORDAN	3750476	cspl3	172.21.5.219
38	HOFMEESTER, DUWAIN	3758009	cspl3	172.21.5.219

39	JABAAR, MOGAMAT SHAFIEK	3936200	cspi3	172.21.5.219
40	JACOBS, ADRIAN ALEX	3850269	cspi3	172.21.5.219
41	JACOBS, CWAYITA	3957043	cspi3	172.21.5.219
42	JAFFER, SALMAAN	3839798	cspi4	172.21.5.225
43	JANSEN, MATTHEW CHRISTOP	3830789	cspi4	172.21.5.225
44	JENA, TINASHE	3567310	cspi4	172.21.5.225
45	JOHNSTON, KEANU MICHEAL	3851727	cspi4	172.21.5.225
46	JOSHUA, KHUMALO	3729344	cspi4	172.21.5.225
47	JOYI, APIWE	3756413	cspi4	172.21.5.225
48	KABINDA, DAN TINOTENDA	3805312	cspi4	172.21.5.225
49	KALI, ASISIPHO	3566355	cspi4	172.21.5.225
50	KANDOLO, FAUSTIN KANKU	3804828	cspi4	172.21.5.225
51	KOOPMAN, JOSH	3851192	cspi4	172.21.5.225
52	KOTA, XOLA	3838873	cspi4	172.21.5.225
53	LEPHAKA, MAFADI GODFREY	3727204	cspi4	172.21.5.225
54	LETHOLE, ABEDNIGO MATIBA	3723049	cspi4	172.21.5.225
55	LOURENS, ETHAN	3949753	cspi5	172.21.5.220
56	LUBISI, AKHONZE	3864102	cspi5	172.21.5.220
57	MABHOZA, MIHLALI	3968546	cspi5	172.21.5.220
58	MABUSE, OTSHEPENG	3721129	cspi5	172.21.5.220
59	MACINGWANE, APIWE	3831144	cspi5	172.21.5.220
60	MAFINYONGWANA, SANGE	3739698	cspi5	172.21.5.220
61	MAGODYO, VIMBAI LINDIWE	3961602	cspi5	172.21.5.220
62	MAGUBENI, ONELA	3843895	cspi5	172.21.5.220
63	MAHEMBE, BRIGHT	3750046	cspi5	172.21.5.220
64	MAHLANGU, BANELE NJABULO	3877608	cspi5	172.21.5.220
65	MAHWIBILA, POTEGO	3679247	cspi5	172.21.5.220
66	MAKETELA, MAFA MAHMOOD	3819708	cspi5	172.21.5.220
67	MAKHOBABA, FANELESIBONGE	3693518	cspi5	172.21.5.220
68	MALATJIE, PHOMOLO	3857333	cspi6	172.21.5.218
69	MALINDA, CLINT	3721923	cspi6	172.21.5.218
70	MANAN, ALIE NURUDEEN	3670018	cspi6	172.21.5.218
71	MANQINA, SIVA	3779899	cspi6	172.21.5.218
72	MATINKETJA, THABO	3940089	cspi6	172.21.5.218
73	MAVUSO, QINISO MAXWELL	3951535	cspi6	172.21.5.218
74	MAXWELL, NICOLAH	3929666	cspi6	172.21.5.218
75	MBUYANE, LINDOKUHLE PERE	3566630	cspi6	172.21.5.218
76	MENTOOR, WESLEY	3539211	cspi6	172.21.5.218
77	MENWE, OFENTSE	3753092	cspi6	172.21.5.218

78	MHLANGA, UYANDA	3721097	cspi6	172.21.5.218
79	MHLIFILI, LUKHANYO	3859082	cspi6	172.21.5.218
80	MJACU, ANDISIWE	3850285	cspi6	172.21.5.218
81	MLANGENI, LOYISO ARNOLD	3877015	cspi7	172.21.5.217
82	MNQANGENI, NDIYAKHOLWA	3866372	cspi7	172.21.5.217
83	MOALUSI, KAMOGELO	3757784	cspi7	172.21.5.217
84	MODIBA, MOSHIBUDI	3929447	cspi7	172.21.5.217
85	MOLOKWE, WADALISA ORATIL	3932150	cspi7	172.21.5.217
86	MONA, MPENDULO	3932484	cspi7	172.21.5.217
87	MQAMBALALA, MSAWENKOSI	3853330	cspi7	172.21.5.217
88	MSENGANA, VUSUMZI	3721883	cspi7	172.21.5.217
89	MYEKI, KAWULEZA	3972814	cspi7	172.21.5.217
90	MZEMBEGWA, TAKUDZWA SIK	3805515	cspi7	172.21.5.217
91	NDLOVU, NKOSINATHI ANESU	3804909	cspi7	172.21.5.217
92	NGEMA, ZWELIHLE	3921507	cspi7	172.21.5.217
93	NGUBANE, VUKILE NKOSIVUM	3968407	cspi7	172.21.5.217
94	NGUBOMBBI, SOLETHU	3855542	cspi8	172.21.5.215
95	NJEMLA, QHAMASANDE	3690497	cspi8	172.21.5.215
96	NJINI, DANIEL JUNIOR	3958291	cspi8	172.21.5.215
97	NODODILE, THANDILE	3692513	cspi8	172.21.5.215
98	NONYUKELA, MIHLALI	3875841	cspi8	172.21.5.215
99	NSUNBA, PASCAL	3963848	cspi8	172.21.5.215
100	NTSHONGWANA, EMIHLE	3835153	cspi8	172.21.5.215
101	NUH ILMI, MOHAMUD	3804885	cspi8	172.21.5.215
102	OCTOBER, CAMERON	3840100	cspi8	172.21.5.215
103	PARKER, MOHAMMED NAJEEB	3758789	cspi8	172.21.5.215
104	PATHAN, TAWFEEQ GHUSAIN	3756405	cspi8	172.21.5.215
105	PRINS, CAMERON	3956874	cspi8	172.21.5.215
106	RADEBE, SHAWN	3851662	cspi8	172.21.5.215
107	RISIVA, VUNENE	3958923	cspi9	172.21.5.212
108	RUGAN, JOHN ANDRE	3945639	cspi9	172.21.5.212
109	RYKLIEF, HISHAAM	3652426	cspi9	172.21.5.212
110	SAMODIEN, YUSUF	3970279	cspi9	172.21.5.212
111	SAPULA, ASIVE	3688197	cspi9	172.21.5.212
112	SEBOA, MOEGAMAD JAMEEL	3968295	cspi9	172.21.5.212
113	SHONGWE, FEZIWE MELVIN	3950336	cspi9	172.21.5.212
114	SIFILI, SINETHEMBA	3646853	cspi9	172.21.5.212
115	SINANDILE, MZKAZI NALEDI	3931958	cspi9	172.21.5.212
116	SPENGANE, ONKE	3678021	cspi9	172.21.5.212

117	STEYL, DOUW LODEWYK	3924812	cspi9	172.21.5.212
118	STOYILE, RECKSON	3954599	cspi9	172.21.5.212
119	STRYDOM, TITANIA	3722490	cspi9	172.21.5.212
120	TAGUCHI, NOBORU DAVID	3620843	cspi11	172.21.5.210
121	TANDY, AYDAN DAMIAN	3958867	cspi11	172.21.5.210
122	TINZI, THEMBELANI	3850851	cspi11	172.21.5.210
123	TOM, LUNGELO	3938243	cspi11	172.21.5.210
124	VALENTINE, CASEY	3857065	cspi11	172.21.5.210
125	VAN DER BURGH, DONNE	3930855	cspi11	172.21.5.210
126	VAN ROOYEN, LAURENCIA MEI	3932038	cspi11	172.21.5.210
127	VILANE, MPILENHLE NQOBANI	3939086	cspi11	172.21.5.210
128	VONCO, NKOSINATHI SIMBOSI	3647698	cspi11	172.21.5.210
129	VUSANI, SIYAMTANDA	3875509	cspi11	172.21.5.210
130	WU, MAN WAI	3970287	cspi11	172.21.5.210
131	XAMLASHE, NCEBA ALBERT	3761484	cspi11	172.21.5.210
132	XANASI, ATHULE	3756162	cspi11	172.21.5.210